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OHIO
AGRICULTURAL
STATISTICS
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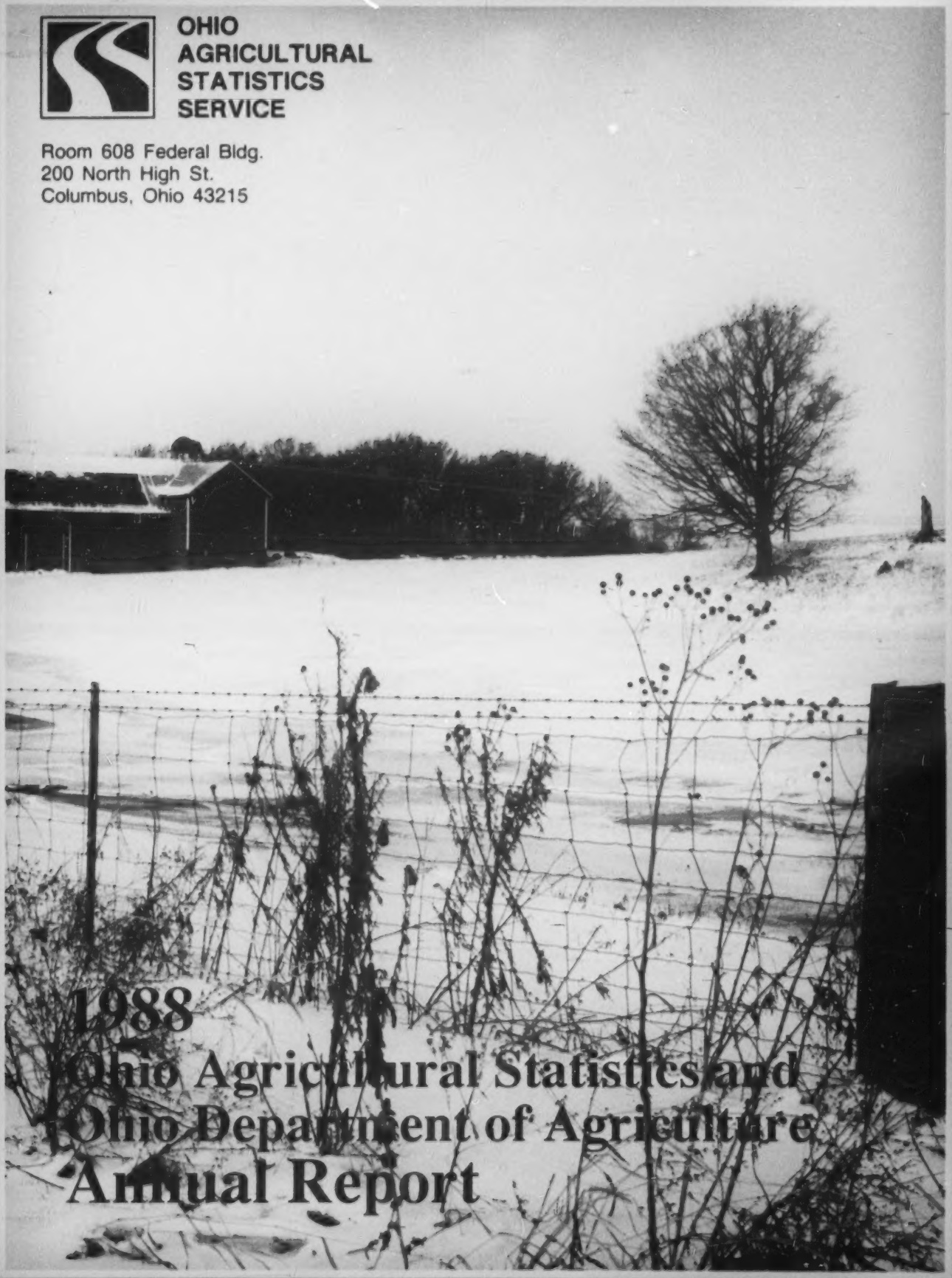
Columbus, Ohio 43215



1988
Ohio Agricultural Statistics and Ohio Department of Agriculture Annual Report

RICHARD F. CELESTE
GOVERNOR

STATE OF OHIO
OFFICE OF THE GOVERNOR
COLUMBUS 43266-0601

One out of five Ohioans is employed in some aspect of our state's largest industry--Agriculture. I am proud to be the Governor of a state where this traditional and vital industry contributes so much to the economy, and is a way of life for so many thousands of people. Our farmers and ranchers take the greatest pride in producing the finest food and fiber found anywhere.

The statistics reflecting this bounty, as compiled by the Ohio Agricultural Statistics Service, are here in this publication. In addition, it contains the Annual Report of the Ohio Department of Agriculture. This essential branch of state government has many diverse duties in conjunction with its responsibilities to our largest industry.

Schoolchildren and state officials alike--in fact, anyone needing data on Ohio agriculture--will find this publication to be an invaluable source of information. It has been made possible through the cooperation of the Ohio Department of Agriculture, the Ohio Agricultural Statistics Service, and the Ohio Cooperative Extension Service. However, it is up to all of us to support and encourage the continued growth of our agricultural industry.

With best regards,

Richard F. Celeste

Richard F. Celeste
Governor

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Richard F. Celeste, Governor
Steven D. Maurer, Director

I take great pride in presenting to you the 1988 Annual Report of the Ohio Department of Agriculture (ODA) and annual data from the Ohio Agricultural Statistics Service. This report was prepared in accordance with Section 149.01 of the Ohio Revised Code.

You now have at your fingertips the most comprehensive guide to Ohio agriculture that can be found. Those in search of statistics and general knowledge will find the accurate information contained within to be of great help. This publication is a result of the combined efforts of ODA, the Agricultural Statistics Service and the Ohio Cooperative Extension Service.

The drought conditions during the summer of 1988 caused a great deal of stress to crops, animals and farmers alike. Although yields declined in most areas, the loss was not as substantial as was expected. We owe a great debt to the agricultural researchers who developed superior, hardy seed hybrids, our farmers for their dedication, and the Southern farmers and fellow Ohioans who donated hay to feed hungry animals.

When you use this bulletin, please join me in thanking our farmers, who persevere despite many hardships. We need to recognize them for their achievements.

Sincerely,

OHIO DEPARTMENT OF AGRICULTURE

Steven Maurer

Steven D. Maurer
Director

Equal Opportunity in Employment and Services

AGR 0011

1988
OHIO AGRICULTURAL STATISTICS

Compiled by
OHIO AGRICULTURAL STATISTICS SERVICE
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ACKNOWLEDGEMENTS

Estimates made by the Ohio Agricultural Statistics Service are based on information supplied by farmers and agri-businesses. These estimates are the result of the data collected on probability designed surveys. Considerable information is collected from farmers randomly selected for telephone or personal interviews. Data for county estimates are collected from a large mail survey and, where available, check data are used to the extent possible.

Our sincere thanks are also extended to the office staff, field and telephone interviewers of the Ohio Agricultural Statistics Service. The cover design, layout, and technical assistance were provided by William C. Warren, John K. Victor and Lloyd Lemmermann of the Ohio Cooperative Extension Service.

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YEAR	NUMBER OF FARMS	CORN ACRES HARVESTED	SOYBEANS ACRES HARVESTED	WINTER WHEAT ACRES HARVESTED	HAY ACRES HARVESTED	OATS ACRES HARVESTED	CATTLE INVENTORY	HOG INVENTORY	STOCK SHEEP INVENTORY
		(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)
1989							1,760		200
1988	84,000	3,250	3,700	920	1,625	200	1,820	2,210	210
1987	84,000	3,180	3,980	800	1,450	250	1,800	2,150	245
1986	88,000	3,880	3,620	1,050	1,460	160	1,840	2,000	225
1985	89,000	4,230	3,870	950	1,450	310	1,835	1,980	220
1984	90,000	4,130	3,770	1,100	1,350	220	1,880	1,970	225
1983	92,000	3,060	3,280	1,200	1,260	240	1,850	2,200	250
1982	93,000	4,255	3,700	1,200	1,340	340	1,850	1,920	260
1981	94,000	4,040	3,450	1,600	1,420	270	1,815	2,050	260
1980	95,000	4,120	3,760	1,370	1,430	290	1,825	2,150	265
1979	96,000	3,830	4,080	1,320	1,440	290	1,750	2,120	290
1978	96,000	3,850	3,870	1,080	1,550	340	2,025	2,160	310
1977	97,000	3,870	3,480	1,540	1,550	370	2,250	1,750	380
1976	99,000	4,080	2,880	1,600	1,540	440	2,305	1,900	382
1975	101,000	3,575	3,100	1,680	1,510	465	2,350	1,675	404
1974	112,000	3,820	3,140	1,450	1,380	475	2,150	1,950	441
1973	113,000	3,270	3,590	800	1,500	540	2,134	2,274	481
1972	114,000	3,286	3,010	1,029	1,476	367	2,113	2,320	538
1971	116,000	3,776	2,634	944	1,550	539	2,072	2,611	575
1970	118,000	3,249	2,550	925	1,440	528	2,031	2,838	605
1969	120,000	3,013	2,475	1,017	1,415	585	2,011	2,557	617
1968	122,000	3,096	2,325	1,196	1,600	692	2,011	2,583	636
1967	124,000	3,516	2,231	1,514	1,654	494	2,052	2,557	642
1966	126,000	3,328	2,105	1,183	1,786	642	2,094	2,388	649
1965	129,000	3,295	2,044	1,258	1,853	606	2,204	2,191	662
1964	131,000	3,328	1,825	1,446	1,907	652	2,272	2,331	669
1963	135,000	3,200	1,738	1,461	1,906	767	2,295	2,619	727
1962	139,000	2,963	1,756	1,238	1,894	825	2,272	2,757	790
1961	144,000	2,718	1,722	1,457	2,005	737	2,272	2,651	832
1960	149,000	3,576	1,499	1,428	1,937	1,023	2,250	2,599	924
1959	154,000	3,687	1,455	1,264	1,977	1,100	2,228	2,707	973
1958	158,000	3,206	1,429	1,436	2,118	1,068	2,251	2,603	1,046
1957	162,000	3,206	1,404	1,436	2,154	1,101	2,345	2,479	1,036
1956	168,000	3,523	1,301	1,496	2,244	1,101	2,393	2,666	1,036
1955	174,000	3,708	1,193	1,496	2,395	1,251	2,369	2,836	1,046
1954	180,000	3,708	1,122	1,740	2,525	1,117	2,417	2,579	1,036
1953	186,000	3,531	1,007	2,384	2,606	1,044	2,347	2,302	1,036
1952	192,000	3,567	940	2,249	2,516	1,186	2,235	2,502	987
1951	200,000	3,532	1,124	1,906	2,590	1,140	2,170	3,014	940
1950	208,000	3,364	1,090	2,118	2,563	1,075	2,107	3,173	940
1949	211,000	3,617	875	2,353	2,255	1,265	2,107	3,051	979
1948	214,000	3,691	908	2,353	2,384	1,171	2,128	2,962	1,053
1947	216,000	3,386	950	2,179	2,497	714	2,150	2,962	1,132
1946	219,000	3,641	903	1,831	2,536	1,348	2,172	3,118	1,258
1945	223,000	3,468	1,077	2,129	2,560	1,162	2,239	3,182	1,430
1944	225,000	3,651	1,243	1,918	2,605	1,047	2,262	3,182	1,625
1943	230,000	3,444	1,213	1,523	2,662	1,126	2,196	4,133	1,958
1942	236,000	3,249	1,051	1,655	2,501	1,185	2,132	3,563	1,939
1941	241,000	3,217	656	1,902	2,563	1,150	2,070	3,181	1,901
1940	244,000	3,185	561	1,921	2,670	1,009	2,029	3,181	1,920
1939	248,000	3,425	500	1,904	2,428	1,009	1,991	3,420	1,920
1938	251,000	3,568	281	2,379	2,412	1,121	1,932	2,800	2,010
1937	254,000	3,796	171	2,430	2,312	1,246	1,951	2,607	2,010
1936	256,000	3,685	132	2,175	2,571	1,210	1,991	2,660	2,230
1935	257,000	3,649	124	2,131	2,555	1,407	1,951	2,333	2,256
1934	253,000	3,317	41	1,994	2,845	1,327	1,930	2,160	2,228
1933	250,000	3,681	33	2,089	2,609	1,385	1,864	3,035	2,175
1932	243,000	3,681	34	1,748	2,511	1,689	1,780	3,130	2,115
1931	234,000	3,718	47	1,861	2,614	1,723	1,680	2,485	2,060
1930	232,000	3,508	31	1,661	2,490	1,758	1,680	2,330	1,945
1929	232,000	3,473	23	1,564	2,625	1,628	1,620	2,462	1,885
1928	234,000	3,612	24	856	2,601	2,374	1,588	2,562	1,866
1927	237,000	3,344	21	1,579	2,990	1,869	1,604	2,638	1,823
1926	242,000	3,596	18	1,730	2,786	1,988	1,620	2,398	1,753
1925	245,000	3,707	17	1,599	2,918	1,968	1,653	2,220	1,745

OHIO HISTORICAL AGRICULTURAL STATISTICS

YEAR	NUMBER OF FARMS	CORN ACRES HARVESTED	SOYBEANS ACRES HARVESTED	WINTER WHEAT ACRES HARVESTED	HAY ACRES HARVESTED	OATS ACRES HARVESTED	CATTLE INVENTORY	HOG INVENTORY	STOCK SHEEP INVENTORY
		(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)
1924	249,000	3,432	20	1,857	3,339	1,600	1,710	2,440	1,691
1923	252,000	3,653		2,062	3,247	1,517	1,770	2,950	1,694
1922	254,000	3,581		2,106	3,370	1,445	1,840	3,100	1,659
1921	256,000	3,730		2,127	3,212	1,554	1,880	2,900	1,768
1920	258,000	3,925		2,393	3,154	1,539	1,927	2,950	1,893
1919	260,000	4,047		2,922	3,027	1,452	1,990	3,084	1,930
1918	261,000	3,875		2,550	3,129	1,750	1,960	3,000	1,825
1917	262,000	4,200		2,050	3,028	1,800	2,040	2,925	1,725
1916	264,000	3,900		1,800	3,378	1,650	N/A	2,760	1,670
1915	266,000	3,800		2,075	2,903	1,600	N/A	2,845	1,856
1914	267,000	3,725		1,975	2,878	1,400	N/A	2,790	2,200
1913	268,000	3,850		1,875	3,028	1,850	1,680	2,660	2,450
1912	270,000	3,950		1,400	2,753	2,100	1,700	2,400	2,700
1911	271,000	3,900		2,150	2,778	1,650	1,740	2,450	3,000
1910	272,000	3,925		2,125	3,028	1,600	1,720	2,415	3,200
1909		4,030		1,828	3,185	1,787	1,685	2,200	3,100
1908		3,750		2,000	3,553	1,425	1,690	2,250	2,820
1907		3,800		2,200	3,250	1,600	1,720	2,430	2,645
1906		3,900		2,250	3,125	1,550	1,730	2,385	2,519
1905		3,750		2,100	3,375	1,625	1,760	2,095	2,290
1904		3,975		1,900	3,450	1,650	1,820	2,150	2,290
1903		3,900		2,250	3,350	1,400	1,902	2,250	2,411
1902		4,000		2,250	3,150	1,350	1,889	2,220	2,649
1901		3,875		2,350	3,200	1,200	1,857	2,105	2,848
1900		4,000		2,500	2,875	1,325	1,800	1,965	2,889
1899		3,860		3,209	2,971	1,115	1,715	2,035	2,860
1898		3,900		2,820	3,000	1,125	1,635	2,130	2,724
1897		3,800		2,500	3,225	1,200	1,560	2,320	2,522
1896		4,000		2,750	2,700	1,400	1,550	2,200	2,967
1895		3,775		2,650	2,925	1,225	1,654	2,195	3,491
1894		3,600		2,600	3,150	1,150	1,690	2,150	4,059
1893		3,450		2,700	3,200	1,000	1,730	2,085	4,273
1892		3,300		3,050	3,125	950	1,790	1,950	4,451
1891		3,350		2,850	3,150	1,000	1,800	2,012	4,364
1890		3,300		2,500	3,100	1,100	1,880	2,220	4,205
1889		3,350		2,400	2,950	1,300	1,950	2,400	4,205
1888		3,450		2,500	2,675	1,200	2,010	2,315	4,335
1887		3,200		3,050	2,625	1,050	2,000	2,235	4,712
1886		3,175		3,050	2,600	975	2,040	2,160	4,908
1885		3,275		2,750	2,700	975	2,015	2,110	5,453
1884		3,075		2,900	2,650	875	2,000	2,100	5,622
1883		3,050		2,950	2,600	750	1,930	2,206	5,796
1882		3,100		3,000	2,500	775	1,920	2,260	5,627
1881		3,050		3,050	2,450	725	1,970	2,400	5,463
1880		3,150		3,000	2,150	875	2,020	2,435	5,190
1879		3,282		2,556	2,190	910	2,035	2,600	4,806
1878		3,450		2,350	2,150	1,000	1,980	2,665	4,450
1877		3,425		1,900	2,175	950	1,900	2,750	4,279
1876		3,500		1,700	2,200	1,025	1,860	2,540	4,457
1875		3,250		2,150	1,850	975	1,900	2,370	4,742
1874		2,900		2,050	1,950	925	2,075	2,315	4,992
1873		2,750		1,900	2,125	850	2,160	2,395	5,311
1872		2,800		1,800	1,950	975	2,160	2,555	5,156
1871		2,850		1,700	1,825	950	2,045	2,800	4,958
1870		2,600		1,725	1,800	900	1,920	2,600	6,050
1869		2,450		1,750	1,950	800	1,885	2,250	7,378
1868		2,350		1,500	2,275	750	1,917	2,000	8,997
1867		2,400		1,400	2,075	775	1,838	2,300	8,821
1866		2,500		1,500	1,925	875		2,540	

PROFILE OF OHIO AGRICULTURE 1988 [1]

Commodity	Unit	Ohio			State ranked first		
		Rank 2/	Prod.-or 3/ inventory	Value of production	State 2/	Prod. or inventory	Value of production
			Thousands			Thousands	
Field Crops							
Corn for grain	Bu.	6	255,000	675,750	Iowa	898,800	2,291,940
Corn for silage	Ton	10	2,625	-	Wisconsin	10,005	-
Oats	Bu.	8	9,000	25,200	Iowa	26,400	77,880
Wheat, winter	Bu.	12	46,000	170,200	Kansas	323,000	1,146,650
Rye	Bu.	17	185	648	S. Dakota	2,250	5,063
Soybeans	Bu.	6	99,900	769,230	Iowa	248,000	1,934,400
Hay, all (baled)	Ton	17	3,543	410,988	California	8,652	813,288
Sugar beets	Ton	12	237	4/	California	5,300	4/
Potatoes, all	Cwt.	22	1,697	9,588	Idaho	99,320	456,872
Tobacco	Lb.	9	14,497	23,165	N. Carolina	552,627	890,140
Vegetables, Fresh							
Sweet corn	Cwt.	7	578	6,705	Florida	5,310	75,402
Lettuce	Cwt.	10	168	5,880	California	43,719	537,744
Tomatoes	Cwt.	15	275	5,885	Florida	19,363	480,202
Celery	Cwt.	6	140	1,890	California	11,873	131,291
Onions, storage	Cwt.	9	165	2,427	Oregon	6,649	61,318
Total fresh vegetables 5/	Cwt.	13	1,571	23,449	California	111,512	1,653,189
Vegetables, Processing							
Tomatoes for processing	Ton	2	359.31	25,727	California	6,547.86	385,669
Cucumbers for processing	Ton	7	36.27	7,181	Michigan	126.5	19,734
Total Processing Vegetables	Ton	6	396.08	32,970	California	6,639.78	404,904
Fruit							
Apples	Lb.	12	95,000	15,295	Washington	3,700,000	588,300
Grapes	Ton	7	8.9	2,349	California	5,240	1,217,740
Peaches	Lb.	22	6,000	1,860	California	1,468,000	189,220
Strawberries	Cwt.	7	73	5,037	California	8,624	388,998
Grape products	Ton	7	8.7	2,219	California	4,474	914,298
Poultry and Poultry Products							
Chickens, total inv., Dec. 1, 1988	Head	5	23,000	-	California	36,800	-
Chickens - sold	Lb.	9	40,572	4,950	Georgia	89,440	9,931
Broilers - production	Lb.	22	51,600	14,706	Arkansas	3,677,011	1,250,184
Turkey production	Lb.	11	93,600	33,696	N. Carolina	938,840	337,982
Egg production, Dec. 1987-Nov. 1988	Million eggs	4	4,477	138,787	California	7,718	297,786
Livestock							
Hogs & pigs inv., Dec. 1, 1988	Head	8	2,210	-	Iowa	13,900	-
Hogs & pigs production (live wt.)	Lb.	8	892,097	371,284	Iowa	5,500,958	2,356,126
All cattle & calves inv., Jan. 1, 1989	Head	19	1,760	-	Texas	13,700	-
Cattle & calves production (live wt.)	Lb.	22	582,090	375,058	Texas	5,763,400	3,884,628
Beef cows inv., Jan. 1, 1989	Head	27	385	-	Texas	5,445	-
Milk cows inv., Jan. 1, 1989	Head	6	367	-	Wisconsin	1,740	-
Sheep & lamb inv., Jan. 1, 1989	Head	15	246	-	Texas	1,900	-
Sheep & lamb production (live wt.)	Lb.	13	17,336	9,383	Texas	94,768	54,412
Wool	Lb.	13	1,845	1,310	Texas	18,200	35,854
Cattle slaughtered	Head	16	423.9	-	Kansas	6,306.6	-
Hogs slaughtered	Head	10	3,008.4	-	Iowa	24,892.6	-
Calves slaughtered	Head	7	141.1	-	New York	439.0	-
Sheep & lambs slaughtered	Head	15	25.2	-	Colorado	1,279.1	-
Red meat production	Lb.	16	824,016	-	Iowa	5,925,942	-
Livestock slaughtering establishments, (not 000) 1/1/89	No.	4	241	-	Pennsylvania	276	-

PROFILE OF OHIO AGRICULTURE 1988 [1]

Commodity	Unit	Ohio			State ranked first		
		Rank 2/	Prod. or inventory 3/	Value of production	State 2/	Prod. or inventory	Value of production
			Thousands			Thousands	
Milk and Milk Products							
Milk production	Million lb.	8	4,835	582,903	Wisconsin	25,400	3,040,869
Milk-Equivalent used for Mfg dairy production	Million lb.	10	1,961	-	Wisconsin	21,361	-
All cheese (excl. cottage cheese)	Lb.	12	97,426	-	Wisconsin	1,901,379	-
Swiss cheese	Lb.	1	59,814	-	Ohio	59,814	-
American type cheese	Lb.	16	16,734	-	Wisconsin	998,056	-
Lowfat cottage cheese	Lb.	3	16,147	-	New York	61,530	-
Creamed cottage cheese	Lb.	4	40,614	-	New York	82,435	-
Cottage cheese curd	Lb.	5	22,161	-	New York	93,372	-
Ice cream	Gal.	6	41,615	-	California	106,900	-
Ice milk	Gal.	7	12,999	-	California	39,864	-
Milk sherbet	Gal.	4	2,637	-	California	5,105	-
Water ices	Gal.	8	953	-	New York	5,568	-
Manufactured dairy plants (not 000)	No.	6	80	-	Wisconsin	338	-
Miscellaneous							
Cash Receipts- 1987	Million Dol.	13	3,422	-	California	15,522	-
Number of farms 1988	No.	7	84.0	-	Texas	156.0	-
Operations with cattle	No.	10	42.0	-	Texas	144.0	-
Operations with hogs	No.	7	15.0	-	Iowa	41.0	-
Operations with sheep	No.	3	7.2	-	Iowa	12.0	-
Operations with milk cows	No.	5	9.5	-	Wisconsin	36.0	-
Honey Production	Lb.	22	2,400	1,824	Florida	25,200	12,852
Fertilizer consumption 6/ (July 1987-June 1988)	Ton	8	1,697.4	-	Illinois	3,723.9	-

1/Data reported for 1988 unless noted otherwise in stub. 2/Rank among the States based on production or inventory. 3/ Thousand unless noted otherwise in stub. 4/ Not available at time of publication. 5/ Includes small quantity of processing vegetables. 6/ Preliminary.

INDEX NUMBERS OF CROP AND LIVESTOCK PRODUCTION, OHIO, 1980-88 1/

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Crops									
Feed grains	115	94	119	59	119	134	123	95	66
Food grains	93	97	71	81	67	81	67	64	64
Soybeans	111	81	109	86	113	132	120	121	82
Other field crops	83	85	99	71	98	77	72	64	64
Seed crops and hay	101	101	99	91	107	129	121	124	100
Vegetables, all	73	76	96	107	101	122	123	107	87
Fruit	240	138	196	151	171	179	120	196	136
Total crops	110	90	110	76	111	127	116	105	76
Livestock & Livestock Products:									
Meat animals	101	99	102	113	108	109	108	111	119
Poultry & poultry products	111	115	128	134	153	158	171	191	198
Milk	97	98	102	107	103	109	111	108	109
Wool	70	70	66	59	57	59	60	60	57
Total livestock & products	100	100	105	113	111	115	116	119	123
Total, all commodities	106	94	108	89	111	123	116	110	92

1/Base year 1977=100

OHIO 1988 CROP SUMMARY

The 1988 growing season will be remembered for the driest spring on record. The accumulated rainfall from April through June was only 44 percent of normal; June rainfall alone was only 21 percent of normal. This caused great problems for germination and emergence of later cuttings as grasslands turned brown and became dormant.

The dry conditions actually began many months earlier. In 1987 the first half of the year was quite dry; rainfall was 79 percent of normal. Rains in June, July and August totaled above normal in each month which provided the moisture necessary to avoid the same conditions that jeopardized the 1988 crops. From September 1987 through June 1988 monthly rainfall was subnormal except in December and February when most rain would run off anyway. The 1988 planting season was particularly dry; April rainfall totaled 2.33 inches (66 percent of normal), May 1.78 inches (47 percent of normal), and June 0.85 inches (21 percent of normal).

Farmers replanted fields hoping to get better stands. Many times success depended on a timely shower or thunderstorm, proper placement of seeds in the soil, topography, and soil types. Many livestock farmers were confronted with the prospect of virtually no forage production for the year. Southern farmers brought hay to Ohio, returning the favor extended to them a few years earlier.

Finally, in late July rains began to provide moisture to promote crop growth. Rainfall was above normal from July through November; December slipped below normal.

1988 CROP AND WEATHER REVIEW

Rains began falling in late July and boosted the monthly total to 4.47 inches or 114 percent of normal. This rain helped green grasses and promoted growth of all crops that had been in a near dormant state. Soils were so dry that many observers were not optimistic for the growing season until the rains continued. Records show that August rains produced 3.55 inches which was 102 percent of normal. September followed with 3.16 inches, 105 percent of normal. October rainfall totaled 4.27 inches of rainfall for 161 percent of normal. December precipitation brought 2.30 inches of rainfall, falling to 89 percent of normal. Crops that were expected to be a total failure responded to the rains and remarkable recoveries were observed across Ohio. It took several months to bring soil back to adequate levels. Ground water supplies and streams were not recharged as calendar year 1989 began.

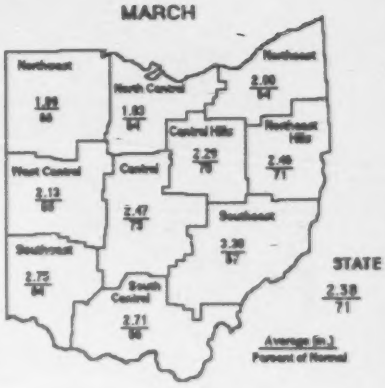
Results of year-end surveys show production higher than originally expected for corn but lower for soybeans and hay among late season crops. Ohio corn production was estimated at 255,000,000 bushels, down 30 percent from the previous year and half of the record high corn harvest produced in 1985. The corn yield, at 85 bushels per acre, was 9 bushels higher than expected earlier in the season. The modern corn plant responded surprisingly well to the late season rains and produced a crop where none was expected. Less acreage was abandoned than originally anticipated because of the late season growth and development of the corn. More acreage was harvested as silage to offset reduced forage yields. Corn-silage yield averaged 10.5 tons per acre, 5.5 tons less than a year earlier. Silage production totaled 2,625,000 tons, almost 3 percent more than the previous year becasue 90,000 acres more were harvested for silage use.

Ohio soybean production during 1988 totaled 99,900,000 bushels; 32 percent less the 1987 output and 38 percent less that the record high production in 1985. Yield per acre at 27 bushels was the lowest since 1974 and 14.5 bushels less than the record high reached in 1985. Hay production amounted to 3,543,000 tons for 1988, 20 percent less than the previous year. The average yield was 2.18 tons per acre compared with 3.05 tons in 1987, a reduction of 29 percent. Some of the lower yield was made up by harvesting more acres. ASCS program acres were opened for grazing and hay production in late June. Yields and quality were low from these acres. These factors along with the loss of one or two cuttings during the growing season lowered yields. Hay was harvested from 1,625,000 acres; the most acres harvested since 1967.

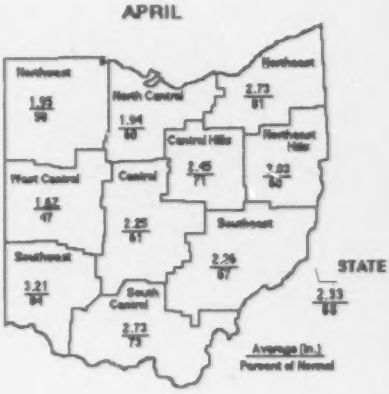
The 1988 growing season did not reduce winter wheat yields far below recent averages but at 50 bushels per acre was 12 bushels less than the record high in 1985. Oats took a beating because the hot, dry weather was opposite of the best conditions for this crop. Production was 9,000,000 bushels, a record low. Yield was only 45 bushels per acre, the lowest in 31 years.

As the 1988 crop season closed Ohio farmers planted an estimated 1,230,000 acres of winter wheat to be used for all purposes in 1989, up 23 percent from a year earlier and 45 percent from 2 years earlier. Farmers had no serious problems planting winter wheat. Seeding progess ran at the usual pace; slightly behind the swift progress of the seedings during the fall of 1987. Dry soils were a concern during the early stages of planting but monthly rainfall was recharging topsoils. Soil moisture supplies gradually were recharged and by October moisture was adequate for germination and emergence of the wheat. Winter wheat had very little snow cover. Temperatures typically fluctuated widely but tended to be above normal.

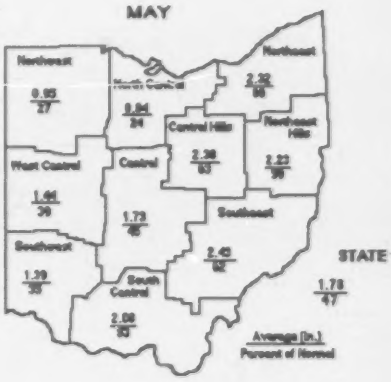
MARCH



APRIL



MAY



JUNE

OHIO CROP VALUES

The total value of production of all principal crops estimated in Ohio totaled $2,177,114,000 in 1988, only 3 percent less than the comparable value of Ohio crops production in 1987 and 9 percent more than the 1986 total crop value. Production of the major crops (soybeans, corn, hay, wheat, and oats) was much lower in 1988 compared with 1986 and 1987. The unit prices made up most of the difference in the 1988 production shortfall. The corn preliminary price for 1988 was $2.65 per bushel compared with $1.95 in 1987 and $1.50 in 1986. Corn production was off 30 percent from 1987 to 1988 but value was down only 4 percent. Soybeans preliminary price advanced to $7.70 per bushel, far ahead of the 1986 price of $4.86 and 1987's $5.94. Value of production for 1988 was $769,230,000; down 12 percent from a year earlier on production that was down 32 percent from a year earlier. Hay value moved up dramatically during the dry summer of 1988 and reached a preliminary season price of $116.00 per ton compared with $79.50 in 1987 and $64.50 in 1986. Hay production was down 20 percent from 1987 and value of production increased 17 percent entirely because of the higher prices. Winter wheat value of production leaped 41 percent for 1988 and reached $170,200,000 on the strength of higher prices. The 1987 Ohio wheat price averaged $2.61 per bushel; the preliminary1988 price was $3.70 per bushel. Oat value of production fell 6 percent. Output fell almost in half because of adverse growing conditions. A sudden interest in health benefits of oat bran boosted demand at a time of reduced supplies which produced a run-up in price to a record high of $2.80 per bushel.

OHIO VEGETABLE PRODUCTION

Production of fresh market and processing vegetables, including strawberries, totaled 9,565,600 hundredweight (cwt.) in 1988 compared with 10,937,000 cwt. produced in 1987. Two main factors contributed to this 13 percent reduction in output. First, total planted acreage was down 8 percent. Also, an early season drought resulted in a 12 percent decline in harvested acreage and yield reduction in six of the eight major vegetabe crops. Farm value of the vegetable crops totaled $61.5 million, down 17 percent from the $74.3 million received in 1987.

Sweet corn plantings started earlier than usual, but were soon delayed, and often cancelled due to a lack of moisture. The continued dry weather held yields below normal levels and shortened the crops' harvest period. Fresh market tomatoes were also held back due to another dry growing season. As early as May 29, tomato producers were begging for rain. This was particularly true for the earlier planted, ripe pack crop. Late season rains benefited the green pack crop, which produced near normal yields. Farmers limited their strawberry harvest to irrigated fields and saw an increase in yields and prices for 1988.

Major processing tomato producers set additional acreage in 1988 as processors attempted to offset the low 1987 crop. Dry conditions persisted however, and a full crop was not realized. The 1988 drought, in addition to blossom end rot problems kept yields below most recent levels. Prices for the crop held close to 1987 resulting in a farm value of $25.7 million, 3 percent below last season's $26.4 million. The cucumber for pickle crop was reduced by the drought and economic abandonment due to labor shortages when the crop finally developed and was ready for harvest. The reduced output pushed prices up $20 per ton resulting in a $7.2 million farm value for 1988. This was, however, a 13 percent decrease from the 1987 value due to the reduced acreage and yield.

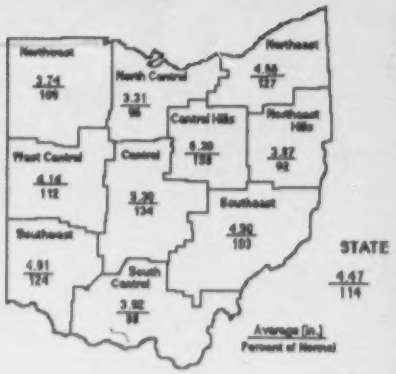
OHIO FRUIT PRODUCTION

Apple production in Ohio totaled 95,000,000 pounds during 1988; down 37 percent from the previous year and almost 6 percent more than the 1986 output. The dry weather caused the reduced output for the current year and possibly weakened some of the trees which may influence yield in future years. Apple prices strengthened only slightly from a year earlier and reached 16.1 cents per pound putting value of production at $15,295,000. This was down 36 percent from the second highest value of production ($23,728,000) set in 1987.

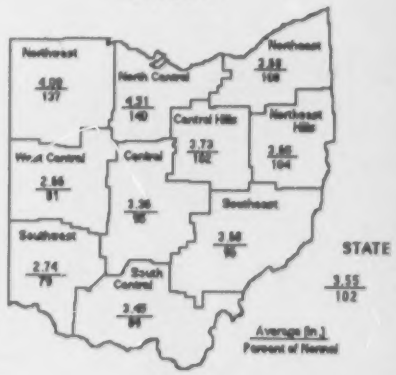
Peach production totaled 6,000,000 pounds in 1988, a decline of 33 percent from a year earlier and 140 percent more than 2 years earlier when frost damage limited the crop to 2,500,000 pounds. Dry weather limited production in 1988 but the price did not advance enough to offset the production losses. Peach production was valued at $1,860,000 with an average price per pound of 31 cents, one cent below the record set in 1982.

Grape production in Ohio during 1988 totaled 8900 tons, 11 percent less than a year earlier. Concords accounted for 7,300 tons or 82 percent of the total grape output. Most of the crop was processed; 8,700 tons vs. 200 tons for fresh use. The processing uses and tonnages were: juice, 7,600 tons; wine, 1,100 tons.

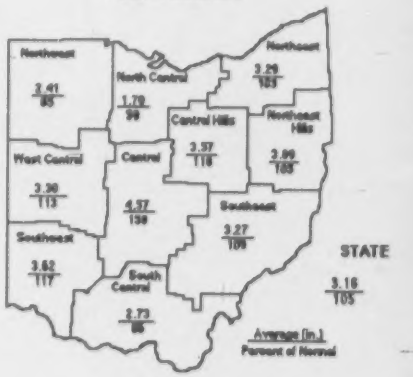
JULY



AUGUST



SEPTEMBER



OCTOBER

ANNUAL SUMMARY: CROP PRODUCTION AND VALUE
OHIO 1986 - 1988, U. S. 1988 1/

Crop	Ohio				U.S.	Ohio			U.S.	
	Acres planted	Acres harvested				Yield per acre				Unit 8/
	1988	1986	1987	1988	1988	1986	1987	1988	1988	
	Thou.	Thousand acres								
All Corn	3,300									
Corn for Grain		3,720	3,020	3,000	58,164	128.0	120.0	85.0	84.6	Bu.
Corn for Silage		160	160	250	8,295	17.0	16.0	10.5	9.5	Ton
Winter Wheat	1,000	1,050	800	920	39,785	46.0	58.0	50.0	39.2	Bu.
All Wheat	1,000	1,050	800	920	53,174	46.0	58.0	50.0	34.1	Bu.
Soybeans for Beans	3,900	3,620	3,980	3,700	57,383	40.5	37.0	27.0	26.8	Bu.
Oats	300	160	250	200	5,590	76.0	70.0	45.0	39.1	Bu.
Rye	40	5	5	5	607	35.0	36.0	37.0	24.8	Bu.
Potatoes	9.5	9.7	9.8	8.7	1,242.9	260	230	195	282	Cwt.
Sugar Beets	17.3	15.0	16.2	14.7	1,300.6	20.6	16.6	15.9	19.1	Ton
Tobacco-Miami V.(41-44)		0.32	0.05	0.02	6.02	1,595	1,440	1,400	1,948	Lb.
-Burley (31)		7.10	7.30	7.80	226.30	1,840	1,640	1,855	2,109	Lb.
- Total all types		7.42	7.35	7.82	635.08	1,829	1,639	1,854	2,158	Lb.
All Hay		1,460	1,450	1,625	65,559	2.95	3.05	2.18	1.93	Ton
Alfalfa		730	725	725	26,695	3.70	3.70	2.90	2.60	Ton
All Other Hay		730	725	900	38,864	2.20	2.40	1.60	1.48	Ton
Strawberries		1.5	1.4	1.3	44,950	38	52	56	260	Cwt.
Apples - Commercial 4/		10.0	10.1	8.7	471.99	9,000	14,900	10,900	18,900	Lb.
Peaches 4/		1.0	1.0	0.9	184.9	2,500	9,000	6,670	14,200	Lb.
Grapes 4/		2.0	1.9	1.9	754.78	4.00	5.26	4.68	7.87	Ton
Sweet Corn	12.8	15.4	16.0	10.5	176.8	82	80	55	81	Cwt.
Celery	0.4	0.47	0.45	0.35	35.98	450	480	400	497	Cwt.
Lettuce	1.6	0.9	1.0	1.4	229.96	110	130	120	273	Cwt.
Onions 5/	0.56	0.49	0.47	0.55	125.65	345	295	300	366	Cwt.
Tomatoes (fresh)	2.9	2.5	2.7	2.2	134.98	270	155	125	258	Cwt.
Fresh Market 6/	19.36	20.86	22.32	16.0	1,109.5	-	-	-	-	Cwt.
Tomatoes (processing)	17.9	14.8	16.0	17.7	274.92	26.00	23.00	20.30	26.95	Ton
Cucumbers (processing)	4.3	4.5	4.5	3.9	118.77	12.72	10.40	9.3	5.48	Ton
Processing 7/	22.44	19.56	20.77	21.84	1,340.74	-	-	-	-	Ton

1/Data for the United States, where applicable, include all seasonal groups and are rounded to conserve space.
2/Price per unit for Ohio and U.S. grain and hay crops obtained from Crop Values, January 1989. Revisions available January 1990.
3/Not available at time of publication
4/Utilized production.
5/When computing Ohio crop values, 15,000 cwt., 20,000 cwt., and 17,000 cwt. were shrinkages in 1986, 1987, and 1988. U.S. shrinkage in 1988 was 4,781,000 cwt. Value of crop based on sales to December 1, 1988.
6/Includes processing totals of dual usage crops and crops not published separately.
7/Processing crops price per unit includes all payments to the growers, including the cost of materials and services provided by the contractor to get the commodity to the plant door. Processing vegetable total includes mi or crop acreages not published separately.
8/For yield and production.

ANNUAL SUMMARY: CROP PRODUCTION AND VALUE
OHIO 1986 - 1988, U. S. 1988 1/

	Ohio			U.S.	Ohio		U.S.	Ohio		U.S.
	Production				Price per unit 2/			Value of production		
	1986	1987	1988	1988	1987	1988	1988	1987	1988	1988
	Thousands				Dollars			Thousand dollars		
All Corn										
Corn for Grain	476,160	362,400	255,000	4,921,191	1.95	2.65	2.60	706,680	675,750	13,011,192
Corn for Silage	2,720	2,560	2,625	78,925	-	-		-		
Winter Wheat	48,300	46,400	46,000	1,560,970	2.61	3.70	3.65	121,104	170,200	5,627,206
All Wheat	48,300	46,400	46,000	1,811,261	2.61	3.70	3.70	121,104	170,200	6,632,805
Soybeans for Beans	146,610	147,260	99,900	1,538,666	5.94	7.70	7.70	874,724	769,230	11,864,842
Oats	12,160	17,500	9,000	218,773	1.53	2.80	2.65	26,775	25,200	562,347
Rye	175	180	185	15,047	2.50	3.50	2.46	450	648	37,027
Potatoes	2,522	2,254	1,697	349,973	5.20	5.65	5.49	11,721	9,588	1,918.704
Sugar Beets	309	269	234	24,794	32.90	3/	3/	8,850	3/	3/
Tobacco -Miami	510	72	28	11,728	.960	1.040	1.020	69	29	11,963
-Burley	13,064	11,972	14,469	477,196	1.546	1.599	1.610	18,509	23,136	768,485
Total all types	13,574	12,044	14,497	1,370,592	1.543	1.598	1.646	18,578	23,165	2,255,664
All Hay	4,307	4,423	3,543	126,817	79.50	116.00	86.20	351,629	410,988	10,640,068
Alfalfa	2,701	2,683	2,103	69,282	-	-		-		
All Other Hay	1,606	1,740	1,440	57,535	-	-		-		
Strawberries	57	73	73	11,669	61.00	69.00	46.00	4,453	5,037	537,289
Apples 4/	90,000	150,000	95,000	8,811,000	.158	.161	.138	23,728	15,295	1,291,037
Peaches 4/	2,500	9,000	6,000	2,495,000	.280	.310	.161	2,520	1,860	395,165
Grapes 4/	8	10.0	8.9	5,744.2	216.00	264.00	238.00	2,158	2,349	1,364,559
Sweet Corn	1,263	1,280	578	14,356	13.00	11.60	14.90	16,640	6,705	213,532
Celery	212	216	140	17,899	10.30	13.50	11.90	2,225	1,890	213,065
Lettuce	99	130	168	62,847	44.30	35.00	15.20	5,759	5,880	954,521
Onions 5/	169	139	165	45,951	15.10	16.40	9.99	1,797	2,427	411,304
Tomatoes (fresh)	675	419	275	34,845	18.10	21.40	26.80	7,584	5,885	934,360
Fresh market	2,886	2,558	1,571	225,784	-	-		35,056	23,449	3,625,264
Tomatoes (processing)	384.8	368.0	359.3	7,409.9	71.70	71.60	60.70	26,386	25,727	449,797
Cucumbers (processing)	57.2	46.8	36.3	650.9	178.00	198.00	200.00	8,330	7,181	129,962
Processing 7/	442.7	415.3	396.1	11,347.4	-	-		34,779	32,970	898,532

OHIO CROP RECORDS:
ACREAGE, YIELD AND PRODUCTION

Crop	Date series began	Record 1/	Harv. acreage		Yield		Total production		Unit
			Acreage	Year	Yield	Year	Production	Year	
			Thousand				Thousand		
Corn for grain	1919	High	4,030	1985	128.0	1986	511,810	1985	Bu.
		Low	2,537	1961	27.5	1930	75,598	1924	Bu.
Corn for silage	1919	High	285	1981	17.0	1987	4,000	1982	Ton
		Low	106	1935	5.4	1930	823	1933	Ton
Soybeans for beans	1924	High	4,080	1979	41.5	1985	160,605	1985	Bu.
		Low	17	1925	11.5	1926	207	1926	Bu.
Wheat	1866	High	3,209	1899	62.0	1985	72,380	1977	Bu.
		Low	800	1987	6.0	1900	9,000	1866	Bu.
Oats	1866	High	2,374	1928	85.0	1985	92,400	1912	Bu.
		Low	160	1986	20.0	1890	9,000	1988	Bu.
Barley 2/	1866	High	318	1928	54.0	1972	8,427	1928	Bu.
		Low	8	1980	15.0	1933	332	1934	Bu.
Rye	1866	High	200	1913	43.0	1985	2,700	1913	Bu.
		Low	4	1985	10.0	1896	150	1981	Bu.
Popcorn 3/	1935	High	30.0	1945	3,550.0	1976	66,740	1976	Lb.
		Low	4.0	1935	1,150.0	1936	7,000	1935	Lb.
Alfalfa hay	1919	High	1,052	1955	4.00	1985	2,800	1985	Ton
		Low	93	1920	1.30	1930	188	1919	Ton
Other hay	1964	High	1,080	1968	2.40	1987	2,100	1973	Ton
		Low	725	1987	1.49	1965	1,328	1965	Ton
All hay	1866	High	3,553	1908	3.17	1985	4,898	1916	Ton
		Low	1,260	1983	0.60	1895	1,755	1895	Ton
Red clover seed 3/	1919	High	352.0	1944	95	1978	15,800	1951	Lb.
		Low	10.0	1981	25	1926	700	1981	Lb.
Apples	1934	High					7,886	1937	Bu.
		Low					780	1945	Bu.4/
Peaches	1899	High					3,800	1901	Bu.
		Low					15	1982	Bu.5/
Grapes 6/	1909	High					34.4	1935	Ton
		Low					4.9	1945	Ton
Maple Sirup 3/	1916	High					1,103	1918	Gal.
		Low					35	1973	Gal.
Potatoes - total	1866	High	225.0	1895	270	1985	12,269	1909	Cwt.
		Low	8.7	1988	27	1881	1,697	1988	Cwt.
Sugar beets 7/	1924	High	51.0	1938	21.7	1971	896	1971	Ton
		Low	9.5	1931	5.8	1937	72	1943	Ton
Burley tobacco	1919	High	25.0	1919	2,680	1970	28,350	1982	Lb.
		Low	6.7	1971	715	1935	6,435	1935	Lb.
All tobacco	1866	High	106	1909	2,496	1970	94,575	1918	Lb.
		Low	7.35	1987	620	1875	12,044	1987	Lb.

1/In case of ties,most recent year designated as record year. 2/Estimates discontinued in 1981. 3/Estimates discontinued in 1982. 4/ 42 lbs. 5/ 48 lbs. 6/Utilized production. 7/No acres contracted in 1982.

OHIO AGRICULTURAL STATISTICS DISTRICTS

OHIO COUNTY ESTIMATES, 1987 - 1988
NUMBER OF FARMS, LAND IN FARMS, AVERAGE SIZE OF FARM

COUNTY & DISTRICT	NUMBER OF FARMS		AVERAGE SIZE FARM		LAND IN FARMS	
	1987	1988	1987	1988	1987	1988
	Number		Acres		Thousand acres	
ALLEN	1,090	1,090	183	183	199	200
DEFIANCE	980	980	217	217	213	213
FULTON	1,200	1,190	187	188	224	224
HANCOCK	1,210	1,210	241	243	292	294
HENRY	1,200	1,200	201	202	241	242
LUCAS	530	530	164	162	87	86
PAULDING	730	730	310	311	226	227
PUTNAM	1,460	1,470	197	197	287	289
VAN WERT	900	900	277	279	249	251
WILLIAMS	1,000	1,000	215	216	215	216
WOOD	1,400	1,400	226	227	317	318
DISTRICT 10	11,700	11,700	218	219	2,550	2,560
ASHLAND	1,100	1,100	174	173	191	190
CRAWFORD	940	940	239	240	225	226
ERIE	500	500	196	194	98	97
HURON	1,020	1,010	240	243	245	245
LORAIN	1,000	1,000	146	146	146	146
OTTAWA	610	610	197	197	120	120
RICHLAND	1,100	1,100	171	170	188	187
SANDUSKY	1,000	1,000	212	213	212	213
SENECA	1,450	1,460	210	210	305	306
WYANDOT	780	780	295	295	230	230
DISTRICT 20	9,500	9,500	206	206	1,960	1,960
ASHTABULA	1,280	1,290	148	147	190	190
COLUMBIANA	1,150	1,150	138	138	159	159
CUYAHOGA	180	180	39	39	7	7
GEAUGA	590	580	129	131	76	76
LAKE	270	270	67	67	18	18
MAHONING	740	730	120	122	89	89
MEDINA	1,180	1,170	111	112	131	131
PORTAGE	940	930	123	125	116	116
STARK	1,390	1,400	119	118	165	165
SUMMIT	310	310	65	65	20	20
TRUMBULL	1,040	1,050	116	115	121	121
WAYNE	1,930	1,940	144	143	278	278
DISTRICT 30	11,000	11,000	125	125	1,370	1,370
AUGLAIZE	1,180	1,180	188	188	222	222
CHAMPAIGN	1,040	1,040	226	226	235	235
CLARK	860	860	227	227	195	195
DARKE	2,150	2,160	161	161	347	347
HARDIN	1,130	1,120	236	238	267	267
LOGAN	1,030	1,030	223	223	230	230
MERCER	1,500	1,510	184	183	276	276
MIAMI	1,160	1,160	173	173	201	201
SHELBY	1,150	1,140	197	199	227	227
DISTRICT 40	11,200	11,200	196	196	2,200	2,200
DELAWARE	950	940	202	203	192	191
FAIRFIELD	1,200	1,210	189	188	227	227
FAYETTE	640	640	377	380	241	243
FRANKLIN	680	670	204	206	139	138
KNOX	1,270	1,280	180	180	229	230
LICKING	1,460	1,460	181	180	264	263
MADISON	740	740	373	373	276	276
MARION	800	800	278	279	222	223
MORROW	940	940	183	183	172	172
PICKAWAY	800	800	361	359	289	287
ROSS	870	870	301	302	262	263
UNION	1,050	1,050	235	235	247	247
DISTRICT 50	11,400	11,400	242	242	2,760	2,760

OHIO COUNTY ESTIMATES, 1987 - 1988
NUMBER OF FARMS, LAND IN FARMS, AVERAGE SIZE OF FARM

COUNTY & DISTRICT	NUMBER OF FARMS		AVERAGE SIZE FARM		LAND IN FARMS	
	1987	1988	1987	1988	1987	1988
	Number		Acres		Thousand acres	
BELMONT	800	800	170	170	136	136
CARROLL	800	800	161	161	129	129
COSHOCTON	940	940	209	207	196	195
HARRISON	540	540	226	230	122	124
HOLMES	1,530	1,530	129	128	197	196
JEFFERSON	520	520	148	148	77	77
TUSCARAWAS	1,070	1,070	152	152	163	163
DISTRICT 60	6,200	6,200	165	165	1,020	1,020
BUTLER	1,070	1,070	157	157	168	168
CLERMONT	1,060	1,060	111	111	118	118
CLINTON	970	970	237	237	230	230
GREENE	990	990	198	199	196	197
HAMILTON	270	270	111	115	30	31
MONTGOMERY	1,040	1,040	118	118	123	123
PREBLE	1,300	1,300	166	166	216	216
WARREN	1,000	1,000	159	157	159	157
DISTRICT 70	7,700	7,700	161	161	1,240	1,240
ADAMS	1,500	1,500	139	139	208	209
BROWN	1,780	1,780	125	125	223	223
GALLIA	810	820	154	152	125	125
HIGHLAND	1,500	1,500	173	173	259	259
JACKSON	470	470	170	170	80	80
LAWRENCE	500	500	152	150	76	75
PIKE	560	550	195	196	109	108
SCIOTO	680	680	147	149	100	101
DISTRICT 80	7,800	7,800	151	151	1,180	1,180
ATHENS	600	600	180	177	108	106
GUERNSEY	920	920	165	164	152	151
HOCKING	440	450	136	133	60	60
MEIGS	530	530	192	189	102	100
MONROE	750	740	180	180	135	133
MORGAN	640	640	183	183	117	117
MUSKINGUM	1,160	1,170	186	184	216	215
NOBLE	640	640	184	183	118	117
PERRY	660	660	152	152	100	100
VINTON	200	200	255	255	51	51
WASHINGTON	960	950	168	168	161	160
DISTRICT 90	7,500	7,500	176	175	1,320	1,310
STATE	84,000	84,000	186	186	15,600	15,600

NUMBER OF FARMS, AVERAGE SIZE FARM, AND LAND IN FARMS, OHIO AND UNITED STATES, 1983-88

Year	Number of farms 1/		Average size farm		Land in farm	
	Ohio	U.S.	Ohio	U.S.	Ohio	U.S.
	Number		Acres		Thousand acres	
1983	92,000	2,370,200	173	432	15,900	1,024,195
1984	90,000	2,328,400	176	438	15,800	1,019,378
1985	89,000	2,274,730	178	446	15,800	1,014,383
1986	88,000	2,211,920	180	456	15,800	1,007,643
1987	84,000	2,176,110	186	461	15,600	1,002,603
1988	84,000	2,158,800	186	463	15,600	998,692

1/ A farm is defined as a place with annual sales of agricultural commodities of $1,000 or more.

OHIO COUNTY ESTIMATES, 1987 - 1988
CORN FOR GRAIN: ACRES, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Allen	45,800	45,300	134.2	83.9	6,148,000	3,801,600
Defiance	27,400	29,300	91.5	63.9	2,506,400	1,873,400
Fulton	72,600	78,500	107.4	100.4	7,796,400	7,881,900
Hancock	56,800	63,100	117.2	76.6	6,658,400	4,836,600
Henry	52,500	59,400	105.4	99.1	5,533,500	5,883,700
Lucas	20,400	18,900	108.4	97.4	2,211,000	1,841,000
Paulding	42,000	41,300	113.1	81.4	4,751,100	3,361,700
Putnam	50,200	49,000	116.2	85.7	5,833,900	4,197,500
Van Wert	59,900	62,000	135.2	97.9	8,100,200	6,070,200
Williams	41,900	51,100	93.5	65.9	3,916,300	3,369,400
Wood	73,300	79,300	108.4	86.4	7,944,400	6,853,800
DISTRICT 10	542,800	577,200	113.1	86.6	61,399,600	49,970,800
Ashland	36,100	34,700	120.3	75.1	4,344,000	2,607,400
Crawford	50,400	58,300	133.4	86.5	6,721,700	5,041,100
Erie	26,800	27,900	135.4	89.0	3,628,000	2,482,000
Huron	49,900	55,500	130.4	83.9	6,504,900	4,658,300
Lorain	23,400	22,100	110.3	68.2	2,581,200	1,507,600
Ottawa	16,300	16,500	115.3	69.4	1,879,700	1,144,400
Richland	36,700	33,500	124.6	82.0	4,571,700	2,747,300
Sandusky	50,600	46,600	130.4	85.8	6,596,200	3,999,100
Seneca	62,300	62,800	125.3	71.9	7,809,000	4,513,500
Wyandot	46,100	48,700	130.1	80.1	5,999,300	3,900,400
DISTRICT 20	398,600	406,600	127.0	80.2	50,635,700	32,601,100
Ashtabula	21,600	16,100	112.7	61.8	2,433,600	995,400
Columbiana	23,900	18,300	114.6	70.6	2,739,600	1,291,800
Cuyahoga	*	*	*	*	*	*
Geauga	8,700	3,600	104.8	59.8	912,000	215,400
Lake	*	*	*	*	*	*
Mahoning	14,000	11,700	118.5	68.9	1,658,800	806,700
Medina	23,300	19,400	108.8	72.0	2,533,900	1,395,900
Portage	23,100	16,600	115.6	71.4	2,670,500	1,184,700
Stark	35,600	24,600	121.8	69.6	4,335,300	1,712,000
Summit	2,900	2,200	119.5	71.8	346,600	157,900
Trumbull	17,000	14,700	121.5	82.0	2,065,300	1,205,700
Wayne	59,600	49,500	117.6	70.1	7,007,200	3,469,600
Other Counties	2,600	1,000	99.8	64.6	259,600	64,600
DISTRICT 30	232,300	177,700	116.1	70.3	26,962,400	12,499,700
Auglaize	46,300	53,000	133.0	90.2	6,158,900	4,783,000
Champaign	72,800	75,900	126.1	89.9	9,180,800	6,826,400
Clark	54,500	56,100	126.2	104.9	6,876,500	5,885,400
Darke	85,800	88,800	132.0	75.7	11,329,500	6,718,700
Hardin	64,700	57,700	122.7	84.3	7,939,300	4,864,200
Logan	51,500	55,900	126.2	82.9	6,498,000	4,632,800
Mercer	57,100	70,000	133.0	81.7	7,595,500	5,715,700
Miami	48,200	54,500	129.5	76.9	6,242,200	4,191,100
Shelby	43,900	50,700	132.2	89.5	5,802,100	4,535,900
DISTRICT 40	524,800	562,600	128.9	85.6	67,622,800	48,153,200
Delaware	41,400	44,000	112.1	87.9	4,642,500	3,868,000
Fairfield	63,300	60,800	115.2	97.6	7,291,200	5,931,600
Fayette	71,800	76,800	126.9	101.0	9,111,300	7,757,800
Franklin	31,600	25,700	112.7	93.1	3,562,400	2,393,400
Knox	44,000	42,200	113.2	87.4	4,982,200	3,688,500
Licking	51,100	49,800	113.5	97.0	5,801,300	4,829,400
Madison	70,800	74,800	126.9	102.0	8,982,700	7,629,200
Marion	54,300	49,800	125.2	87.3	6,799,200	4,346,200
Morrow	35,300	39,900	115.2	90.3	4,066,000	3,602,400
Pickaway	77,300	85,200	117.1	86.6	9,054,700	7,376,400
Ross	50,400	47,200	111.3	79.6	5,608,500	3,755,100
Union	52,000	53,100	121.0	85.6	6,294,200	4,548,000
DISTRICT 50	643,300	649,300	118.4	92.0	76,196,200	59,726,000

OHIO COUNTY ESTIMATES, 1987 - 1988
CORN FOR GRAIN: ACRES, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Belmont	2,900	1,900	95.2	50.3	276,000	95,500
Carroll	12,700	10,000	100.2	61.2	1,272,000	612,100
Coshocton	32,100	26,000	123.2	101.9	3,954,600	2,649,600
Harrison	4,600	3,800	115.2	52.5	529,800	199,600
Holmes	27,300	18,800	115.2	79.6	3,144,500	1,495,700
Jefferson	3,500	2,200	106.2	49.7	371,600	109,400
Tuscarawas	25,000	19,500	117.2	81.6	2,929,600	1,590,600
DISTRICT 60	108,100	82,200	115.4	82.1	12,478,100	6,752,500
Butler	38,600	37,600	121.2	78.4	4,680,000	2,946,900
Clermont	12,700	14,600	118.7	70.9	1,507,000	1,035,000
Clinton	73,200	81,200	134.1	101.1	9,813,100	8,207,700
Greene	66,200	59,000	127.2	98.3	8,417,900	5,799,800
Hamilton	4,300	4,700	123.2	79.9	529,800	375,300
Montgomery	30,500	32,000	117.3	77.4	3,577,800	2,476,700
Preble	71,100	74,500	133.1	70.0	9,461,500	5,214,700
Warren	38,800	31,000	117.8	83.3	4,570,900	2,582,500
DISTRICT 70	335,400	334,600	126.9	85.6	42,558,000	28,638,600
Adams	19,200	16,200	88.7	60.4	1,702,200	979,200
Brown	34,700	27,700	100.3	70.8	3,480,400	1,961,700
Gallia	3,400	4,100	79.0	64.5	268,700	264,600
Highland	63,200	68,500	113.7	92.6	7,188,400	6,343,500
Jackson	6,500	6,100	107.5	80.6	699,000	491,600
Lawrence	1,800	1,700	94.8	67.8	170,600	115,200
Pike	15,200	10,000	85.8	64.5	1,304,500	644,800
Scioto	8,500	9,000	92.5	76.6	786,400	689,100
DISTRICT 80	152,500	143,300	102.3	80.2	15,600,200	11,489,700
Athens	4,200	3,100	79.9	58.7	335,700	182,000
Guernsey	4,200	4,700	101.9	72.4	428,100	340,200
Hocking	6,900	4,500	126.9	79.5	875,600	357,800
Meigs	4,600	3,600	72.0	44.8	331,000	161,200
Monroe	2,600	*	100.9	*	262,400	*
Morgan	5,900	4,300	91.9	70.1	542,400	301,300
Muskingum	21,900	17,600	120.1	90.5	2,630,600	1,593,300
Noble	1,700	*	95.9	*	163,100	*
Perry	18,500	16,200	118.6	99.0	2,193,300	1,603,500
Vinton	1,700	1,700	119.9	51.7	203,800	87,900
Washington	10,000	8,400	98.1	47.8	981,000	401,100
Other Counties		2,400		58.4		140,100
DISTRICT 90	82,200	66,500	108.8	77.7	8,947,000	5,168,400
STATE	3,020,000	3,000,000	120.0	85.0	362,400,000	255,000,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of counties with less than 1,000 acres.

CORN SILAGE: HARVESTED ACREAGE, YIELD AND PRODUCTION, BY DISTRICTS, OHIO 1987-88

District	Harvested acres		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Tons per acre		Thousand tons	
10	20,000	29,700	15.4	9.4	308,800	278,600
20	18,200	30,900	15.4	9.5	280,600	293,300
30	33,800	49,900	15.6	10.3	528,200	515,700
40	27,000	45,800	17.3	10.9	465,900	498,400
50	21,800	37,300	17.2	11.8	376,000	441,700
60	12,600	18,600	15.2	10.6	191,100	196,700
70	10,000	13,100	16.9	10.6	168,500	138,400
80	7,600	10,000	15.0	10.7	113,900	107,000
90	9,000	14,700	14.1	10.6	127,000	155,200
State	160,000	250,000	16.0	10.5	2,560,000	2,625,000

OHIO COUNTY ESTIMATES, 1987 - 1988
SOYBEANS: ACREAGE, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Allen	84,900	78,700	39.7	23.4	3,369,200	1,845,500
Defiance	86,600	74,100	29.5	17.8	2,556,500	1,321,600
Fulton	86,800	82,300	39.2	30.7	3,402,500	2,528,000
Hancock	130,200	121,300	36.3	20.0	4,731,900	2,430,200
Henry	100,800	92,900	33.5	27.2	3,376,700	2,531,400
Lucas	37,900	32,600	37.0	28.2	1,401,800	920,600
Paulding	100,800	89,800	31.7	18.8	3,191,700	1,689,800
Putnam	124,800	106,900	33.1	23.9	4,128,700	2,551,500
Van Wert	106,800	101,600	40.5	25.3	4,326,200	2,567,200
Williams	68,900	65,300	34.8	25.6	2,400,800	1,668,700
Wood	129,200	118,200	34.8	27.7	4,501,900	3,279,400
DISTRICT 10	1,057,700	963,700	35.3	24.2	37,387,900	23,333,900
Ashland	23,900	23,000	38.2	30.2	913,600	694,700
Crawford	89,800	89,400	41.0	25.5	3,683,200	2,281,100
Erie	31,600	29,500	41.5	29.7	1,312,800	876,400
Huron	89,200	82,700	40.1	25.6	3,581,200	2,113,100
Lorain	52,600	50,100	38.5	26.3	2,026,100	1,320,100
Ottawa	60,900	54,800	34.9	22.8	2,122,800	1,248,100
Richland	33,800	31,800	37.5	28.7	1,266,700	913,200
Sandusky	89,500	88,900	38.5	23.4	3,445,000	2,079,800
Seneca	121,200	119,200	38.1	21.4	4,616,200	2,555,600
Wyandot	91,700	86,400	38.6	20.8	3,536,800	1,796,700
DISTRICT 20	684,200	655,800	38.7	24.2	26,504,400	15,878,800
Ashtabula	10,300	9,700	33.6	25.3	345,900	245,700
Columbiana	2,100	2,000	38.2	33.3	80,200	66,500
Cuyahoga	*	*	*	*	*	*
Geauga	*	*	*	*	*	*
Lake	*	*	*	*	*	*
Mahoning	3,400	3,000	37.9	32.1	128,700	96,400
Medina	19,800	18,400	38.1	28.7	754,300	528,000
Portage	8,900	8,300	40.7	31.3	362,200	259,900
Stark	10,400	10,100	37.9	31.6	393,800	319,600
Summit	1,100	1,000	40.4	33.5	44,400	33,500
Trumbull	12,400	11,200	40.8	33.6	506,400	376,200
Wayne	18,900	17,800	40.9	33.6	772,400	597,900
Other Counties	1,700	1,300	34.9	27.5	59,400	35,800
DISTRICT 30	89,000	82,800	38.7	30.9	3,447,700	2,559,500
Auglaize	83,600	77,700	38.6	26.3	3,227,900	2,046,600
Champaign	66,100	63,700	35.8	31.0	2,367,400	1,976,700
Clark	61,100	58,200	36.2	33.1	2,212,800	1,926,500
Darke	143,000	129,400	40.7	23.8	5,815,300	3,085,000
Hardin	109,800	97,500	38.0	25.0	4,171,000	2,440,100
Logan	65,800	61,600	39.2	26.9	2,576,800	1,659,700
Mercer	92,700	81,800	40.6	22.8	3,763,800	1,865,500
Miami	71,500	66,000	37.3	25.9	2,667,600	1,707,300
Shelby	78,600	74,000	39.6	26.5	3,110,700	1,963,400
DISTRICT 40	772,200	709,900	38.7	26.3	29,913,300	18,670,800
Delaware	74,800	67,600	35.3	30.0	2,638,800	2,029,100
Fairfield	38,900	37,500	35.8	33.6	1,391,400	1,260,300
Fayette	97,700	90,100	38.4	32.8	3,747,700	2,954,400
Franklin	44,500	42,300	33.4	30.7	1,488,200	1,300,500
Knox	27,400	26,600	37.0	32.0	1,012,500	851,000
Licking	49,800	45,400	35.7	33.5	1,777,800	1,518,900
Madison	121,000	113,200	34.8	34.4	4,209,400	3,891,400
Marion	107,100	102,900	40.0	27.6	4,280,500	2,841,500
Morrow	60,100	53,300	36.3	26.7	2,179,100	1,423,000
Pickaway	98,200	93,800	32.8	31.4	3,223,800	2,947,500
Ross	46,200	41,400	34.7	31.6	1,601,900	1,310,200
Union	105,100	95,300	38.8	27.6	4,073,500	2,631,600
DISTRICT 50	870,800	809,400	36.3	30.8	31,624,600	24,959,400

OHIO COUNTY ESTIMATES, 1987 - 1988
SOYBEANS: ACREAGE, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Belmont	*	*	*	*	*	*
Carroll	2,000	1,900	36.1	35.2	72,200	66,900
Coshocton	1,700	1,500	34.9	34.0	59,300	51,000
Harrison	*	*	*	*	*	*
Holmes	2,000	1,900	34.9	31.3	69,700	59,500
Jefferson	*	*	*	*	*	*
Tuscarawas	3,400	3,700	36.8	32.8	125,200	121,200
Other Counties	800	700	35.4	29.7	28,300	20,800
DISTRICT 60	9,900	9,700	35.8	32.9	354,700	319,400
Butler	30,900	26,900	35.8	27.5	1,105,900	740,600
Clermont	34,600	32,900	35.7	26.2	1,234,600	863,100
Clinton	74,300	67,800	39.0	34.7	2,899,900	2,353,700
Greene	57,500	55,500	36.7	33.3	2,111,100	1,850,900
Hamilton	5,200	4,600	39.0	32.0	203,000	147,300
Montgomery	43,800	40,400	34.6	26.6	1,517,200	1,072,800
Preble	66,800	62,600	39.0	26.3	2,608,500	1,645,300
Warren	40,900	38,200	37.1	32.9	1,518,700	1,255,800
DISTRICT 70	354,000	328,900	37.3	30.2	13,198,900	9,929,500
Adams	7,900	6,200	30.9	23.4	244,300	145,300
Brown	49,200	42,800	35.3	28.0	1,735,900	1,199,100
Gallia	*	*	*	*	*	*
Highland	57,000	61,400	34.8	33.4	1,982,200	2,050,600
Jackson	*	*	*	*	*	*
Lawrence	*	*	*	*	*	*
Pike	8,700	7,500	29.5	28.7	256,700	215,500
Scioto	8,600	8,000	29.0	25.0	249,200	199,700
Other Counties	2,000	2,100	26.7	26.5	53,400	55,600
DISTRICT 80	133,400	128,000	33.9	30.2	4,521,700	3,865,800
Athens	*	*	*	*	*	*
Guernsey	*	*	*	*	*	*
Hocking	1,300	1,500	37.3	36.7	48,500	55,100
Meigs	*	*	*	*	*	*
Monroe	*	*	*	*	*	*
Morgan	*	*	*	*	*	*
Muskingum	1,300	1,500	32.4	33.5	42,100	50,300
Noble	*	*	*	*	*	*
Perry	3,000	4,700	33.8	33.8	101,500	158,800
Vinton	*	*	*	*	*	*
Washington	*	*	*	*	*	*
Other Counties	3,200	4,100	35.8	29.0	114,700	118,700
DISTRICT 90	8,800	11,800	34.9	32.4	306,800	382,900
STATE	3,980,000	3,700,000	37.0	27.0	147,260,000	99,900,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of counties with less than 1,000 acres.

OHIO COUNTY ESTIMATES, 1987 - 1988
ALL WHEAT: ACREAGE, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Allen	14,600	21,700	58.9	48.4	859,300	1,050,900
Defiance	17,700	33,400	52.7	40.9	933,300	1,364,800
Fulton	9,100	12,700	58.7	52.5	534,000	666,300
Hancock	34,500	39,000	59.8	49.7	2,062,000	1,939,800
Henry	23,100	28,800	65.4	51.6	1,511,700	1,485,800
Lucas	3,400	5,800	58.7	49.9	199,700	289,700
Paulding	26,300	40,000	56.7	41.4	1,490,700	1,654,600
Putnam	28,600	34,700	55.7	43.9	1,591,600	1,523,700
Van Wert	23,800	27,800	63.0	49.9	1,498,400	1,387,500
Williams	19,300	28,200	52.0	44.7	1,004,500	1,260,000
Wood	37,600	42,100	65.7	52.5	2,468,700	2,208,700
DISTRICT 10	238,000	314,200	59.5	47.2	14,153,900	14,831,800
Ashland	7,100	6,700	47.9	45.0	340,200	301,700
Crawford	18,300	23,900	57.2	53.4	1,047,300	1,276,300
Erie	6,400	6,000	59.4	52.5	380,000	314,700
Huron	16,500	18,200	54.7	50.5	903,300	919,600
Lorain	7,500	7,900	50.3	48.0	377,300	379,000
Ottawa	9,000	12,300	59.4	48.5	534,900	596,400
Richland	8,200	7,200	54.9	45.6	450,400	328,100
Sandusky	11,900	13,800	58.7	49.5	698,000	682,800
Seneca	23,600	31,700	56.3	45.5	1,328,400	1,443,000
Wyandot	27,500	30,100	56.2	47.6	1,546,700	1,433,900
DISTRICT 20	136,000	157,800	55.9	48.6	7,606,500	7,675,500
Ashtabula	2,300	*	42.0	*	96,600	*
Columbiana	7,100	4,100	50.8	50.2	360,900	205,900
Cuyahoga	*	*	*	*	*	*
Geauga	*	*	*	*	*	*
Lake	*	*	*	*	*	*
Mahoning	2,800	2,500	44.9	49.8	125,600	124,400
Medina	4,800	4,400	43.4	47.7	208,400	210,000
Portage	5,200	2,500	50.1	51.1	260,400	127,800
Stark	7,500	5,000	47.5	52.2	355,900	260,800
Summit	1,000	*	41.7	*	41,700	*
Trumbull	2,700	1,400	49.2	52.6	132,800	73,700
Wayne	13,700	8,300	52.0	48.0	712,400	398,600
Other Counties	900	2,000	46.6	41.9	41,900	83,800
DISTRICT 30	48,000	30,200	48.7	49.2	2,336,600	1,485,000
Auglaize	18,700	23,700	61.0	51.2	1,140,100	1,213,500
Champaign	10,700	11,000	64.0	54.2	685,100	596,300
Clark	6,900	6,900	68.2	58.8	470,700	405,900
Darke	19,900	25,400	61.9	52.8	1,232,300	1,342,300
Hardin	26,200	28,500	56.7	47.4	1,484,600	1,350,800
Logan	10,200	15,500	57.5	49.1	586,300	761,500
Mercer	21,200	27,300	66.1	52.2	1,401,800	1,425,200
Miami	11,700	12,900	62.4	59.2	729,600	764,100
Shelby	14,500	19,600	63.5	53.2	920,700	1,042,900
DISTRICT 40	140,000	170,800	61.8	52.1	8,651,200	8,902,500
Delaware	8,300	11,900	52.1	46.7	432,400	555,300
Fairfield	12,300	11,700	56.7	54.4	697,300	636,900
Fayette	11,100	11,200	67.3	58.8	747,400	658,700
Franklin	6,600	5,900	64.9	53.5	428,400	315,500
Knox	7,900	6,600	49.5	46.6	390,800	307,700
Licking	9,000	8,500	52.7	52.5	474,300	446,200
Madison	13,200	11,900	68.5	58.8	904,400	699,900
Marion	16,500	19,400	58.2	50.6	960,400	980,700
Morrow	7,300	10,700	52.8	46.2	385,600	494,100
Pickaway	18,400	23,200	64.6	57.8	1,188,200	1,341,900
Ross	16,000	17,200	59.3	54.2	949,500	931,400
Union	12,400	17,500	51.5	49.1	638,800	859,100
DISTRICT 50	139,000	155,700	59.0	52.8	8,197,500	8,227,400

OHIO COUNTY ESTIMATES, 1987 - 1988
ALL WHEAT: ACREAGE, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Belmont	*	*	*	*	*	*
Carroll	1,600	1,100	47.9	44.5	76,600	48,900
Coshocton	3,000	1,700	48.6	47.5	145,700	80,700
Harrison	*	*	*	*	*	*
Holmes	4,500	1,800	45.6	45.9	205,400	82,700
Jefferson	*	*	*	*	*	*
Tuscarawas	2,700	1,500	44.3	47.5	119,700	71,200
Other Counties	1,200	400	48.8	42.3	58,500	16,900
DISTRICT 60	13,000	6,500	46.6	46.2	605,900	300,400
Butler	7,500	7,500	57.4	54.0	430,200	404,900
Clermont	*	*	*	*	*	*
Clinton	9,600	10,100	62.4	61.3	599,400	619,500
Greene	7,500	7,600	60.7	55.1	455,500	418,800
Hamilton	*	*	*	*	*	*
Montgomery	5,200	5,600	61.2	56.2	318,400	314,900
Preble	11,300	11,500	65.8	53.4	743,500	614,300
Warren	4,100	4,400	52.7	59.4	216,100	261,200
Other Counties	2,800	2,300	51.9	49.1	145,300	113,000
DISTRICT 70	48,000	49,000	60.6	56.1	2,908,400	2,746,600
Adams	4,800	4,900	49.3	45.9	236,800	225,000
Brown	6,500	5,500	49.4	53.0	321,100	291,500
Gallia	*	*	*	*	*	*
Highland	12,100	13,100	53.7	54.5	649,900	714,000
Jackson	*	*	*	*	*	*
Lawrence	*	*	*	*	*	*
Pike	1,600	1,800	49.8	52.0	79,600	93,600
Scioto	*	1,300	*	37.4	*	48,600
Other Counties	2,000	1,200	46.2	40.8	92,400	49,000
DISTRICT 80	27,000	27,800	51.1	51.1	1,379,800	1,421,700
Athens	*	*	*	*	*	*
Guernsey	*	*	*	*	*	*
Hocking	*	*	*	*	*	*
Meigs	*	*	*	*	*	*
Monroe	*	*	*	*	*	*
Morgan	1,100	*	40.5	*	44,600	*
Muskingum	2,700	1,700	49.7	54.8	134,100	93,100
Noble	*	*	*	*	*	*
Perry	3,500	1,800	53.2	48.4	186,100	87,200
Vinton	*	*	*	*	*	*
Washington	1,400	1,700	54.6	55.5	76,500	94,300
Other Counties	2,300	2,800	51.7	48.0	118,900	134,500
DISTRICT 90	11,000	8,000	50.9	51.1	560,200	409,100
STATE	800,000	920,000	58.0	50.0	46,400,000	46,000,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of counties with less than 1,000 acres.

OHIO COUNTY ESTIMATES, 1987 - 1988
OATS FOR GRAIN: ACRES, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Allen	3,300	2,200	71.9	48.7	237,300	107,100
Defiance	6,500	5,000	70.5	39.0	458,400	194,900
Fulton	*	*	*	*	*	*
Hancock	2,100	2,300	68.1	41.9	143,000	96,400
Henry	2,700	2,800	76.7	43.9	207,100	122,800
Lucas	*	*	*	*	*	*
Paulding	6,000	5,800	76.2	38.5	457,300	223,400
Putnam	4,600	3,000	82.5	33.8	379,500	101,400
Van Wert	4,400	3,500	86.3	37.5	379,700	131,300
Williams	4,000	2,700	66.2	46.0	264,600	124,300
Wood	4,600	4,800	81.5	32.9	374,900	157,700
Other Counties	2,800	2,500	70.2	51.4	196,500	128,600
DISTRICT 10	41,000	34,600	75.6	40.1	3,098,300	1,387,900
Ashland	6,900	5,400	73.5	42.5	507,100	229,500
Crawford	3,600	3,700	74.4	50.7	267,900	187,500
Erie	1,600	1,300	78.6	51.7	125,700	67,200
Huron	7,500	4,700	77.6	43.0	582,100	202,000
Lorain	4,200	2,600	69.1	49.2	290,300	127,800
Ottawa	1,800	1,400	66.3	44.6	119,300	62,400
Richland	8,700	5,600	62.3	37.5	541,700	210,000
Sandusky	2,300	2,000	71.6	32.4	164,600	64,700
Seneca	6,400	6,600	81.0	36.5	518,700	240,800
Wyandot	2,000	2,100	71.0	39.1	142,000	82,200
DISTRICT 20	45,000	35,400	72.4	41.6	3,259,400	1,474,100
Ashtabula	8,400	6,900	71.5	41.9	601,000	289,400
Columbiana	10,100	7,200	68.5	50.2	692,300	361,100
Cuyahoga	*	*	*	*	*	*
Geauga	6,600	3,000	60.8	40.8	401,000	122,500
Lake	*	*	*	*	*	*
Mahoning	5,600	4,200	75.2	52.6	421,000	220,900
Medina	6,400	4,500	74.0	46.3	473,400	208,500
Portage	3,900	3,500	69.6	41.9	271,600	146,700
Stark	8,700	7,100	70.8	48.7	615,600	345,600
Summit	1,200	1,100	63.0	42.4	75,600	46,600
Trumbull	6,100	5,800	74.4	54.0	453,900	313,000
Wayne	16,000	12,000	73.4	45.0	1,174,200	539,600
Other Counties	1,000	900	63.0	38.8	63,000	34,900
DISTRICT 30	74,000	56,200	70.8	46.8	5,242,600	2,628,800
Auglaize	3,800	3,900	69.3	47.4	263,300	184,800
Champaign	1,300	1,400	65.7	58.5	85,400	81,900
Clark	*	*	*	*	*	*
Darke	3,900	4,400	71.5	49.6	279,000	218,100
Hardin	2,800	2,500	65.8	36.1	184,300	90,300
Logan	2,200	1,900	67.2	47.5	147,800	90,200
Mercer	7,800	6,800	77.3	46.6	602,600	316,800
Miami	*	*	*	*	*	*
Shelby	3,600	4,200	79.2	50.0	285,000	209,800
Other Counties	1,600	1,300	72.8	48.9	116,400	63,600
DISTRICT 40	27,000	26,400	72.7	47.6	1,963,800	1,255,500
Delaware	1,400	1,300	61.1	50.1	85,600	65,100
Fairfield	*	1,400	*	55.2	*	77,300
Fayette	*	*	*	*	*	*
Franklin	*	*	*	*	*	*
Knox	7,000	5,000	59.8	47.4	418,400	237,000
Licking	3,400	2,400	70.2	57.1	238,700	137,100
Madison	*	*	*	*	*	*
Marion	1,300	1,500	66.4	43.6	86,300	65,400
Morrow	3,500	2,700	63.9	41.9	223,500	113,200
Pickaway	*	*	*	*	*	*
Ross	*	*	*	*	*	*
Union	2,100	1,800	64.7	46.6	135,800	83,900
Other Counties	3,300	2,700	64.6	53.6	213,200	144,800
DISTRICT 50	22,000	18,800	63.7	49.1	1,401,500	923,800

OHIO COUNTY ESTIMATES, 1987 - 1988
OATS FOR GRAIN: ACRES, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Bu. per acre		Bushels	
Belmont	1,100	*	61.8	*	68,000	*
Carroll	3,800	2,600	61.8	42.5	234,800	110,600
Coshocton	2,000	1,900	58.0	45.4	116,000	86,200
Harrison	1,900	1,200	69.4	44.8	131,900	53,800
Holmes	13,200	6,200	65.1	49.5	858,900	307,100
Jefferson	1,500	*	58.0	*	87,000	*
Tuscarawas	4,500	3,900	67.1	54.2	301,900	211,400
Other Counties		1,700		41.2		70,000
DISTRICT 60	28,000	17,500	64.2	47.9	1,798,500	839,100
Butler	*	*	*	*	*	*
Clermont	*	*	*	*	*	*
Clinton	*	*	*	*	*	*
Greene	*	*	*	*	*	*
Hamilton	*	*	*	*	*	*
Montgomery	*	*	*	*	*	*
Preble	1,000	*	62.6	*	62,600	*
Warren	*	*	*	*	*	*
Other Counties	3,000	3,600	57.2	45.1	171,700	162,500
DISTRICT 70	4,000	3,600	58.6	45.1	234,300	162,500
Adams	*	*	*	*	*	*
Brown	*	*	*	*	*	*
Gallia	*	*	*	*	*	*
Highland	*	*	*	*	*	*
Jackson	*	*	*	*	*	*
Lawrence	*	*	*	*	*	*
Pike	*	*	*	*	*	*
Scioto	*	*	*	*	*	*
Other Counties	2,000	1,900	55.8	36.8	111,500	70,000
DISTRICT 80	2,000	1,900	55.8	36.8	111,500	70,000
Athens	*	*	*	*	*	*
Guernsey	1,100	*	49.8	*	54,800	*
Hocking	*	*	*	*	*	*
Meigs	*	*	*	*	*	*
Monroe	*	*	*	*	*	*
Morgan	*	*	*	*	*	*
Muskingum	2,500	1,700	64.1	53.6	160,300	91,100
Noble	*	*	*	*	*	*
Perry	*	*	*	*	*	*
Vinton	*	*	*	*	*	*
Washington	*	*	*	*	*	*
Other Counties	3,400	3,900	51.5	42.9	175,000	167,200
DISTRICT 90	7,000	5,600	55.7	46.1	390,100	258,300
STATE	250,000	200,000	70.0	45.0	17,500,000	9,000,000

* Counties with less than 1,000 acres not published. Counties with more than [illegible] acres are also not published, if necessary to preserve the confidentiality of counties with less than 1,000 acres.

OHIO COUNTY ESTIMATES, 1987 - 1988
ALL HAY:- ACREAGE, YIELD AND PRODUCTION

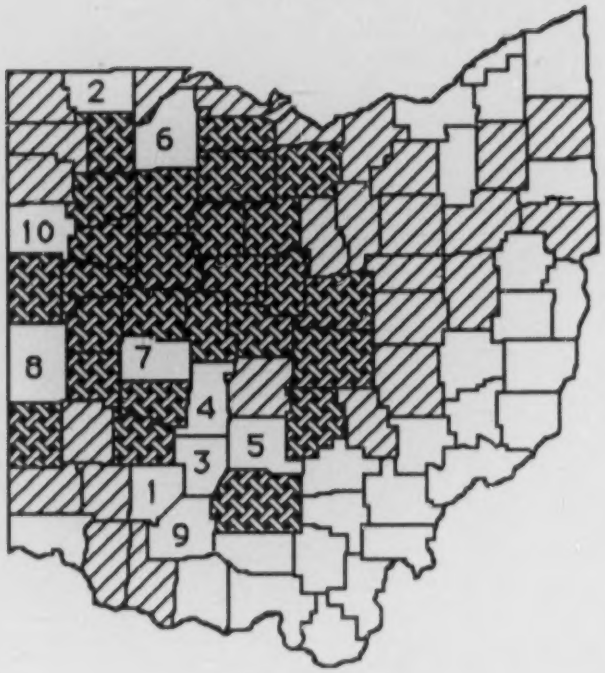
County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Tons per acre		Tons	
Allen	7,700	7,500	3.32	2.16	25,600	16,200
Defiance	9,500	9,000	3.56	1.64	33,800	14,800
Fulton	5,200	5,500	3.12	2.47	16,200	13,600
Hancock	7,700	9,400	4.00	1.67	30,800	15,700
Henry	7,800	8,000	3.73	1.98	29,100	15,800
Lucas	2,300	3,000	4.00	2.57	9,200	7,700
Paulding	7,500	7,000	2.47	1.20	18,500	8,400
Putnam	11,100	15,000	3.24	1.85	36,000	27,700
Van Wert	4,000	5,600	3.40	1.59	13,600	8,900
Williams	12,200	12,000	3.56	2.03	43,400	24,400
Wood	8,000	7,000	3.14	1.91	25,100	13,400
DISTRICT 10	83,000	89,000	3.39	1.87	281,300	166,600
Ashland	33,000	39,000	3.68	2.72	121,500	105,900
Crawford	9,200	8,500	3.01	2.35	27,700	20,000
Erie	5,300	5,500	4.04	2.76	21,400	15,200
Huron	8,700	8,500	3.79	2.35	33,000	20,000
Lorain	12,200	15,000	3.93	2.39	48,000	35,900
Ottawa	7,300	8,500	3.47	2.22	25,300	18,900
Richland	21,500	25,000	3.49	2.26	75,100	56,600
Sandusky	5,600	6,000	3.36	2.35	18,800	14,100
Seneca	11,500	10,000	3.26	2.26	37,500	22,600
Wyandot	6,700	6,000	3.39	1.52	22,700	9,100
DISTRICT 20	121,000	132,000	3.56	2.41	431,000	318,300
Ashtabula	40,700	44,500	3.00	2.21	122,300	98,400
Columbiana	33,600	43,000	3.65	3.08	122,700	132,500
Cuyahoga	1,400	1,500	2.50	2.33	3,500	3,500
Geauga	16,200	20,500	3.86	1.93	62,600	39,600
Lake	3,700	4,500	2.27	1.69	8,400	7,600
Mahoning	15,000	16,500	3.37	2.85	50,500	47,100
Medina	24,700	25,500	3.53	2.32	87,200	59,100
Portage	17,200	22,000	3.81	2.50	65,500	55,000
Stark	29,400	32,500	3.63	2.98	106,700	96,800
Summit	4,400	5,000	3.34	2.28	14,700	11,400
Trumbull	22,800	25,500	3.63	3.07	82,700	78,200
Wayne	60,900	74,000	3.86	3.02	235,000	223,600
DISTRICT 30	270,000	315,000	3.56	2.71	961,800	852,800
Auglaize	15,800	16,000	3.87	2.54	61,100	40,600
Champaign	10,500	11,000	3.06	2.07	32,100	22,800
Clark	7,300	9,500	2.82	2.16	20,600	20,500
Darke	18,100	22,000	3.96	2.20	71,700	48,300
Hardin	7,000	9,000	2.83	1.99	19,800	17,900
Logan	16,500	17,500	3.30	2.20	54,500	38,500
Mercer	24,000	25,000	4.04	2.28	96,900	57,000
Miami	7,800	8,000	3.88	2.53	30,300	20,200
Shelby	20,000	20,000	3.55	2.32	70,900	46,300
DISTRICT 40	127,000	138,000	3.61	2.26	457,900	312,100
Delaware	9,200	12,000	2.91	2.12	26,800	25,400
Fairfield	16,600	21,000	3.03	2.28	50,300	47,800
Fayette	8,600	9,500	2.24	2.19	19,300	20,800
Franklin	4,400	7,000	3.11	2.61	13,700	18,300
Knox	28,700	30,000	3.55	2.66	101,800	79,900
Licking	26,800	30,000	2.79	2.38	74,900	71,400
Madison	7,000	7,500	2.81	2.05	19,700	15,400
Marion	5,800	5,500	3.55	2.18	20,600	12,000
Morrow	10,400	10,000	2.92	2.05	30,400	20,500
Pickaway	11,500	15,000	3.10	1.83	35,600	27,400
Ross	20,100	26,000	2.42	1.72	48,700	44,700
Union	11,900	16,500	3.64	2.17	43,300	35,800
DISTRICT 50	161,000	190,000	3.01	2.21	485,100	419,400

OHIO COUNTY ESTIMATES, 1987 - 1988
ALL HAY: ACREAGE, YIELD AND PRODUCTION

County & District	Acreage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Tons per acre		Ton	
Belmont	36,300	40,000	2.55	1.83	92,600	73,200
Carroll	31,500	36,500	3.29	2.08	103,500	75,800
Coshocton	31,300	37,500	2.82	2.25	88,200	84,200
Harrison	23,200	26,000	3.06	1.58	70,900	41,000
Holmes	46,600	53,500	3.20	2.58	149,200	137,800
Jefferson	18,800	19,500	3.02	1.91	56,700	37,300
Tuscarawas	32,300	37,000	2.98	2.49	96,100	92,200
DISTRICT 60	220,000	250,000	2.99	2.17	657,200	541,500
Butler	20,400	20,000	2.77	2.12	56,500	42,400
Clermont	10,500	11,000	2.34	1.61	24,600	17,700
Clinton	8,000	6,500	2.55	2.06	20,400	13,400
Greene	9,800	10,000	3.61	2.54	35,400	25,400
Hamilton	3,900	5,000	3.41	2.54	13,300	12,700
Montgomery	7,600	9,500	3.43	2.13	26,100	20,200
Preble	11,000	13,000	2.98	2.01	32,800	26,100
Warren	10,800	15,000	2.80	1.97	30,200	29,500
DISTRICT 70	82,000	90,000	2.92	2.08	239,300	187,400
Adams	28,800	35,000	2.23	1.53	64,300	53,400
Brown	22,900	27,000	2.03	1.57	46,500	42,300
Gallia	19,200	19,500	2.04	1.70	39,100	33,200
Highland	24,000	23,000	2.79	1.92	66,900	44,100
Jackson	19,100	21,000	2.20	1.66	42,000	34,800
Lawrence	8,300	8,500	1.96	1.56	16,300	13,300
Pike	12,400	15,000	2.77	1.66	34,300	24,900
Scioto	11,300	11,000	2.23	1.87	25,200	20,600
DISTRICT 80	146,000	160,000	2.29	1.67	334,600	266,600
Athens	21,500	24,000	2.22	1.51	47,700	36,200
Guernsey	34,000	35,500	2.53	2.08	86,000	73,700
Hocking	7,100	8,000	2.38	1.40	16,900	11,200
Meigs	18,800	19,000	1.90	1.41	35,700	26,800
Monroe	23,500	23,500	2.46	1.69	57,800	39,800
Morgan	21,100	24,500	2.66	1.87	56,100	45,900
Muskingum	42,300	48,500	2.73	2.25	115,600	109,300
Noble	21,500	22,000	1.86	1.61	39,900	35,500
Perry	14,800	14,500	2.61	2.08	38,600	30,100
Vinton	7,800	9,000	2.15	1.66	16,800	14,900
Washington	27,600	32,500	2.31	1.69	63,700	54,900
DISTRICT 90	240,000	261,000	2.40	1.83	574,800	478,300
STATE	1,450,000	1,625,000	3.05	2.18	4,423,000	3,543,000

CORN

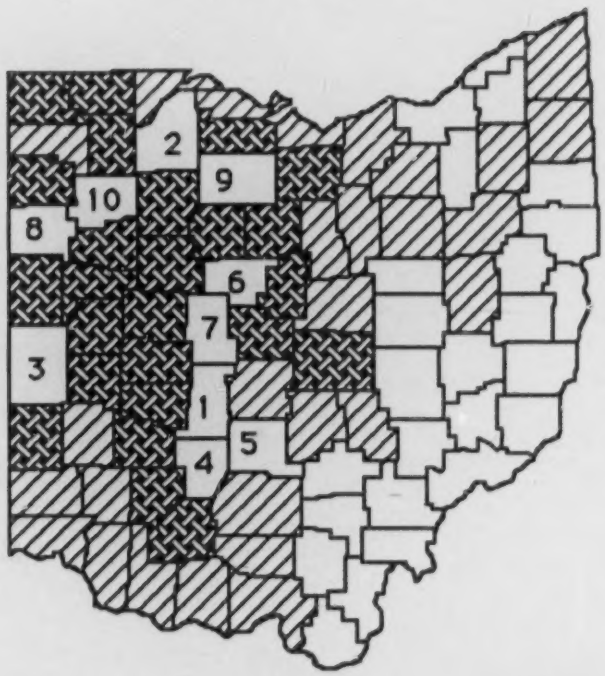
THOUSAND BUSHELS



Symbol	Thousand Bushels
1-10	6,000 +
	3,500 - 5,999
	1,000 - 3,499
	UNDER 1,000

SOYBEANS

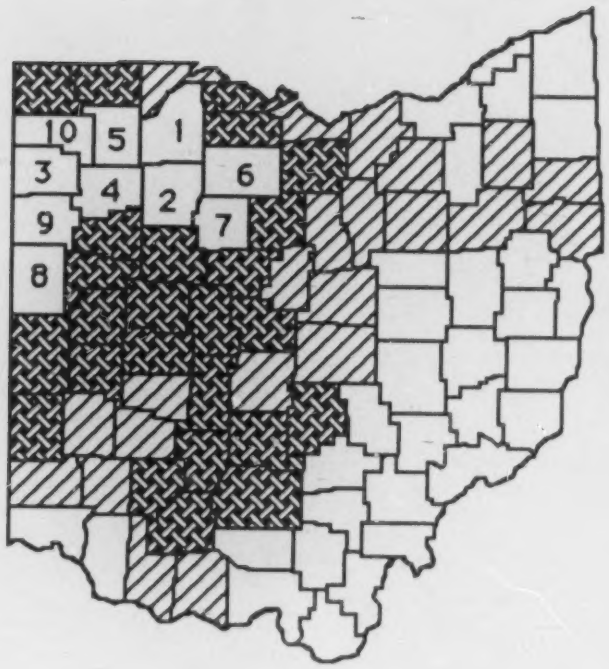
THOUSAND BUSHELS



Symbol	Thousand Bushels
1-10	2,500 +
	1,400 - 2,549
	100 - 1,399
	UNDER 100

WHEAT

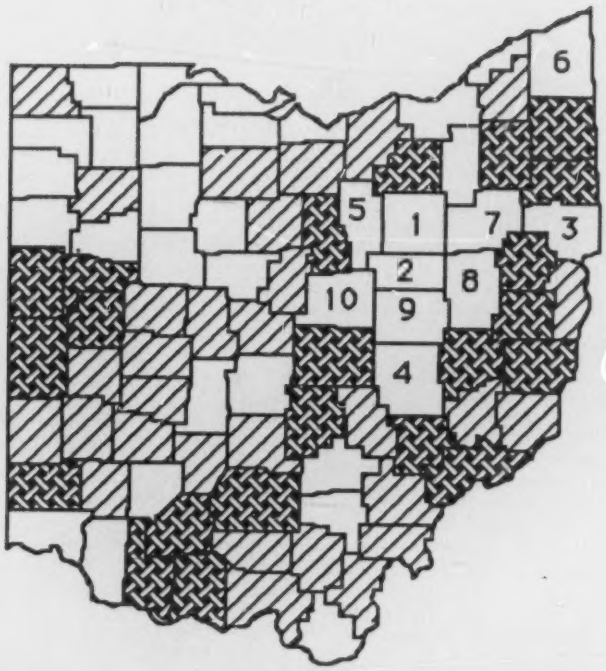
THOUSAND BUSHELS



Symbol	Thousand Bushels
1-10	1,360 +
	500 - 1,359
	100 - 499
	UNDER 100

HAY

THOUSAND TONS



Symbol	Thousand Tons
1-10	79 +
	40 - 78.9
	20 - 39.9
	UNDER 20

SUGAR BEETS: ACRES, YIELD, AND PRODUCTION, OHIO , 1987 and 1988

County & District	Acerage Harvested		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Tons per acre		Tons	
Hancock	*	*	*	*	*	*
Henry	*	0	*	0	*	0
Lucas	*	*	*	*	*	*
Putnam	1,490	1,110	15.6	14.3	23,200	15,900
Wood	1,040	1,040	14.8	11.6	15,400	12,100
OTHER COUNTIES	870	470	14.3	13.2	12,400	6,200
DISTRICT 10	3,400	2,620	15.0	13.1	51,000	34,200
Erie	*	*	*	*	*	*
Huron	*	*	*	*	*	*
Ottawa	1,250	1,010	15.0	15.8	18,700	16,000
Sandusky	7,700	7,230	16.9	16.4	130,500	118,700
Seneca	3,000	2,840	17.4	15.8	52,300	44,800
Wyandot	0	*	0	*	0	*
OTHER COUNTIES	850	1,000	19.4	20.3	16,500	20,300
DISTRICT 20	12,800	12,080	17.0	16.5	218,000	199,800
STATE	16,200	14,700	16.6	15.9	269,000	234,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of counties with less than 1,000 acres.

BURLEY TOBACCO: ACRES, YILED AND PRODUCTION, OHIO, 1987 and 1988

County	Harvested acres		Yield		Production	
	1987	1988	1987	1988	1987	1988
	Acres		Lbs. per acre		Lbs.	
Adams	1,870	2,100	1,685	1,825	3,151,000	3,838,000
Brown	2,360	2,640	1,710	2,025	4,036,000	5,343,000
Clermont	770	735	1,780	1,740	1,372,000	1,281,000
Gallia	790	890	1,385	1,705	1,094,000	1,519,000
Highland	510	550	1,700	1,690	868,000	929,000
Jackson	50	55	1,820	1,800	91,000	99,000
Lawrence	430	355	1,200	1,575	516,000	560,000
Pike	110	105	1,480	1,655	163,000	174,000
Ross	35		1,485		52,000	
Scioto	290	260	1,690	2,285	490,000	594,000
Other 1/	85	110	1,635	1,200	139,000	132,000
State	7,300	7,800	1,640	1,855	11,972,000	14,469,000

1/Includes Athens, Clinton, Fayette, Greene, Hamilton, Meigs, Monroe, Montgomery, Noble, Vinton and Warren in 1986 and 1987; 1988 includes the previously mentioned counties plus Ross and excludes Vinton.

FALL POTATOES: PRODUCTION AND TOTAL STOCKS HELD BY GROWERS AND DEALERS, OHIO, 1983-88

Crop year	Production	Stocks	Stocks following year			
		December 1	January 1	February 1	March 1	April 1
	Thousand hundredweight					
1983	1,886	700	430	270	100	40
1984	2,418	950	650	450	250	100
1985	2,465	800	500	300	130	40
1986 1/	2,522	680	450	250	N/A	N/A
1987	2,254	700	500	300	N/A	N/A
1988	1,697	450	260	125	N/A	N/A

1/ Beginning in 1986 the summer and fall season estimates were combined into one fall season estimate.

PROCESSING TOMATOES: HARVESTED ACREAGE, YIELD AND PRODUCTION, OHIO 1987 AND 1988

Counties	Harvested acreage 1987	Harvested acreage 1988	Yield 1987	Yield 1988	Production 1987	Production 1988
	Acres		Tons		Tons	
Darke	1,220	1,100	18.9	16.6	23,100	18,300
Fayette	-	1,090	-	19.3	-	21,000
Fulton	1,260	1,410	22.6	21.3	28,500	30,000
Hancock	470	520	18.9	20.4	8,900	10,600
Henry	800	910	20.1	19.7	16,100	17,900
Lucas	350	350	21.4	21.4	7,500	7,500
Mercer	160	270	16.3	17.4	2,600	4,700
Ottawa	1,120	1,200	23.5	16.3	26,300	19,500
Putnam	2,720	2,500	21.0	22.8	57,100	57,000
Sandusky	2,700	3,200	26.4	21.5	71,200	68,800
Seneca	740	700	27.8	22.7	20,600	15,900
Williams	570	650	21.9	22.2	12,500	14,400
Wood	1,880	1,990	21.1	18.2	39,700	36,200
Other counties 1/	2,010	1,810	31.2	20.7	53,900	37,510
Total	16,000	17,700	23.0	20.3	368,000	359,310

1/ Other counties includes Allen, Clinton, Defiance, Erie, Greene, Huron, Madison, Miami, Van Wert, And Wyandot in both 1987 and 1988; 1987 also includes Adams, Fayette, and Pickaway.

PROCESSING TOMATOES: METHOD OF PLANTING AS PERCENT OF HARVESTED ACREAGE, OHIO, 1987 AND 1988

Methods of planting	Harvested acreage 1987	Harvested acreage 1988	% of total 1987	% of total 1988
Seeded	1,300	500	8	3
Transplanted	14,700	17,200	92	97
Total	16,000	17,700	100	100

PROCESSING TOMATOES: METHOD OF HARVESTING AS PERCENT OF HARVESTED ACREAGE, OHIO, 1987 AND 1988

Methods of harvesting	Harvested acreage 1987	Harvested acreage 1988	% of total 1987	% of total 1988
Mechanical	14,700	15,800	92	89
Handpicked	1,300	1,900	8	11
Total	16,000	17,700	100	100

OFF-FARM COMMERCIAL GRAIN STORAGE CAPACITY, DECEMBER 1, 1987 AND 1988

County	Capacity 12/1/87	Capacity 12/1/88	County	Capacity 12/1/87	Capacity 12/1/88	County	Capacity 12/1/87	Capacity 12/1/88
	1,000 bushels			1,000 bushels			1,000 bushels	
Adams	850	857	Hancock	18,323	18,786	Paulding	7,261	7,302
Allen	9,764	9,852	Hardin	5,867	6,449	Perry	64	86
Ashland	2,222	2,160	Harrison	3	3	Pickaway	4,807	4,738
Ashtabula	487	765	Henry	9,227	9,584	Pike	0	0
Athens	7	7	Highland	2,546	2,871	Portage	1,879	1,850
Auglaize	4,548	5,204	Hocking	1,373	1,400	Preble	4,094	4,504
Belmont	16	16	Holmes	46	298	Putnam	3,488	3,554
Brown	155	163	Huron	10,833	11,741	Richland	2,490	2,469
Butler	4,078	2,324	Jackson	60	115	Ross	3,826	2,939
Carroll	39	9	Jefferson	2	2	Sandusky	5,002	3,855
Champaign	6,141	7,351	Knox	2,735	2,639	Scioto	150	174
Clark	4,651	3,423	Lake	0	0	Seneca	5,524	5,005
Clermont	0	0	Lawrence	500	500	Shelby	8,446	8,690
Clinton	4,419	6,135	Licking	2,484	2,732	Stark	379	688
Columbiana	914	683	Logan	2,485	2,738	Summit	0	0
Coshocton	4,285	3,266	Lorain	1,933	1,848	Trumbull	450	477
Crawford	4,865	5,432	Lucas	55,827	57,948	Tuscarawas	237	259
Cuyahoga	507	507	Madison	4,456	5,795	Union	1,290	1,369
Darke	4,770	4,844	Mahoning	1,127	1,919	Van Wert	6,901	7,852
Defiance	3,072	3,327	Marion	9,425	10,828	Vinton	0	0
Delaware	1,032	1,240	Medina	426	478	Warren	559	521
Erie	3,405	3,163	Meigs	17	17	Washington	6	4
Fairfield	1,023	1,078	Mercer	3,007	5,103	Wayne	3,300	4,091
Fayette	4,528	5,542	Miami	7,562	5,517	Williams	3,736	4,194
Franklin	10,532	10,513	Monroe	3	3	Wood	12,430	13,307
Fulton	12,278	13,470	Montgomery	4,141	4,628	Wyandot	11,625	14,257
Gallia	60	12	Morgan	10	10			
Geauga	157	184	Morrow	3,697	4,069	OHIO	346,360	362,260
Greene	2,367	2,427	Muskingum	3,526	2,185			
Guernsey	4	4	Noble	2	2			
Hamilton	11,885	12,213	Ottawa	3,572	3,696	U.S. Total	9,610,590	9,614,800

GRAIN STOCKS: TOTAL STOCKS AND PERCENT OF PRODUCTION, BY QUARTERS, OHIO, 1987-1988

Crop	Year	March 1/		June 1/		September 1/		December 1/	
		All positions	% of 1/ prod.	All positions	% of 1/ prod.	All positions	% of 1/ prod.	All positions	% of 1/ prod.
		Thousand bushels							
CORN	1987	372,352	78	283,901	60	169,539	36	431,300	119
	1988	325,000	90	219,900	61	146,900	41	316,700	124
SOYBEANS	1987	79,785	54	39,979	27	11,684	8	97,500	66
	1988	66,900	45	36,800	25	18,650	13	89,300	89
WHEAT	1987	20,284	42	12,009	25	49,281	106	35,950	77
	1988	26,100	56	17,800	38	61,100	133	43,200	94
OATS 2/	1987			5,447	45				
	1988			5,000	29				

1/ Percent of production refers to previous year's production, except September 1 for wheat and December 1 for all crops when current year production is used. 2/ Stocks estimated only on June 1st.

STOCKS OF GRAIN: BY POSITION AND QUARTER, OHIO, 1987-88

Crop	Year	March 1		June 1		September 1		December 1	
		On farms	Off farms	On farms	Off farms	On farms	Off farms	On farms	Off farms
		Thousand bushels							
CORN	1987	210,000	162,352	140,000	143,901	50,000	119,539	245,000	186,300
	1988	165,000	160,000	100,000	119,900	45,000	101,900	190,000	126,700
SOYBEANS	1987	42,000	37,185	13,000	26,979	5,000	6,684	52,000	45,500
	1988	30,000	36,900	12,000	24,800	4,000	14,650	37,000	52,300
WHEAT	1987	1,300	18,984	800	11,209	5,000	44,281	2,600	33,350
	1988	900	25,200	700	17,100	8,000	53,100	4,000	39,200
OATS 1/	1987			4,000	1,447				
	1988			2,000	3,000				

1/ Beginning in 1986 stocks estimated only on June 1.

ALL HAY ON FARMS: OHIO, 1987 AND 1988

Year	May 1	Percent 1/ of prod.	Dec 1	Percent of prod.
	Thou. ton	Pct.	Thou. ton	Pct.
1987	560	13	2,875	65
1988	575	13	1,878	53

1/Pertains to previous year's production.

CORN, SOYBEANS, WHEAT, OATS, ALL HAY: HARVESTED ACRES, YIELD AND PRODUCTION, OHIO, 1983-88

Year	Corn for grain			Soybeans			Wheat		
	Harvested acres	Yield	Production	Harvested acres	Yield	Production	Harvested acres	Yield	Production
	Thou.	Bu./acre	Thou. bu.	Thou.	Bu./acre	Thou. bu.	Thou.	Bu./acre	Thous. bu
1983	2,800	80.0	224,000	3,280	32.0	104,960	1,200	49.0	58,800
1984	3,900	118.0	460,200	3,770	36.5	137,605	1,100	44.0	48,400
1985	4,030	127.0	511,810	3,870	41.5	160,605	950	62.0	58,900
1986	3,720	128.0	476,160	3,620	40.5	146,610	1,050	46.0	48,300
1987	3,020	120.0	362,400	3,980	37.0	147,260	800	58.0	46,400
1988	3,000	85.0	255,000	3,700	27.0	99,900	920	50.0	46,000

Year	Oats			All Hay			5 Major Crops
	Harvested acres	Yield	Production	Harvested acres	Yield	Production	Acres 1/
	Thou.	Bu./acre	Thou. bu.	Thou.	Tons/acre	Thou.tons	Thousands
1983	240	64.0	15,360	1,260	2.57	3,244	9,080
1984	220	63.0	13,860	1,350	2.81	3,795	10,620
1985	310	85.0	26,350	1,450	3.17	4,600	10,860
1986	160	76.0	12,160	1,460	2.95	4,307	10,220
1987	250	70.0	17,500	1,450	3.05	4,423	9,700
1988	200	45.0	9,000	1,625	2.18	3,543	9,945

1/ Corn and soybeans planted acres hay, wheat and oats harvested acres.

MARKETINGS: WHEAT, OATS, CORN, SOYBEANS, PERCENT OF ANNUAL SALES BY MONTHS, OHIO, 1986-1987, 1987-1988

Month	Wheat		Oats		Month	Corn		Soybeans	
	1986-87	1987-88	1986-87	1987-88		1986-87	1987-88	1986-1987	1987-88
	Percent					Percent			
Jul.	65	60	31	30	Sep.	7	11	8	20
Aug.	8	10	12	20	Oct.	17	24	27	28
Sep.	3	4	4	13	Nov.	14	12	11	8
Oct.	2	1	5	6	Dec.	9	5	5	4
Nov.	1	1	4	5	Jan.	11	8	10	8
Dec.	2	2	8	4	Feb.	8	5	6	5
Jan.	4	4	8	5	Mar.	8	6	8	5
Feb.	2	2	5	4	Apr.	7	4	9	4
Mar.	1	1	6	5	May	6	6	6	7
Apr.	1	1	5	2	Jun.	5	8	4	5
May	1	2	5	3	Jul.	4	6	3	3
Jun.	10	12	7	3	Aug.	4	5	3	3

FARM REAL ESTATE: VALUE AND CASH RENTS, OHIO, 1986-89

Year	Average value per acre 1/			Cash rent per acre 2/		
	Index 3/	Actual	% Prev. Year	Cropland	Pasture	Whole Farms
		Dollars			Dollars	
1986	81	1,013	90	70.30	24.90	65.90
1987	75	942	93	63.20	25.10	58.40
1988	79	991	105	65.60	28.40	62.00
1989	84	1,051	106	70.80	27.60	66.70

1/Averages for this historic series use census of agriculture data for benchmarks and in intercensal years are based on sample surveys of farmers, farm real estate brokers, land appraisers, local banks, and county officials. 2/Estimates are based on a survey conducted February 1. 3/1977=100 (base year).

1988 LIVESTOCK, DAIRY AND POULTRY SUMMARY

Cash receipts from cattle, hog and sheep marketings during 1988 totalled $788,487,000, a modest 1 percent increase from 1987 to 1988 when compared with the 8 percent advance from 1986 to 1987. Cattle cash receipts sustained the upward momentum with an 8 percent advance from 1987 to 1988. Hog cash receipts fell 5 percent and sheep receipts dropped 22 percent in the same time period. Cattle contributed 51 percent of livestock cash receipts; hogs, 48 percent; and sheep, 1 percent.

Cattle and calf production totalled 582,090,000 pounds during 1988; a decline of 2 percent from a year earlier. Marketings of cattle and calves fo. 1988, at 619,470,000 pounds, declined only 1 percent from the previous year. Higher prices in 1988 for both cattle and calves easily offset the lower marketings. Cattle, at $63.70 per hundred weight (cwt.) advanced $5.10 from a year earlier and calves, at $86.10 per cwt. for 1988 increased $13.00.

The number of cattle and calves in Ohio on January 1, 1989 was estimated at 1,760,000 head, 3 percent less than one year earlier. The value per head on the inventory date was $620, the highest value on record. The total value of all cattle also reached a new record high at $1,091,200,000. This is the fourth year cattle value surpassed the billion dollar mark; the other years were 1980, 1981 and 1988. The inventory by classes showed heifers for beef cow and dairy cow replacement were the only two groups showing an increase from a year earlier. The dry soils and lack of forage or pasture during the 1988 growing season forced some cattlemen to severely cull herds. Apparently mature animals were sent to slaughter and calves were saved to raise as replacements. The number of operations with cattle was 42,000, a decline of 1,000 operations.

Ohio hog producers had 2,210,000 hogs on hand on December 1, 1988 for a 3 percent increase from a year earlier. The number of market hogs, at 1,915,000 head was up 55,000 head (3 percent) from a year earlier. The breeding hogs numbered 295,000 head, 5,000 (2 percent) more than a year earlier. The pig crop for the year December 1, 1987 to November 30, 1988 was 3,668,000; 8 percent more than the pig crop produced in the previous year. The value of the hog and pig inventory on December 1, 1988 was $149,175,000 or $67.50 per head. The total value of the hog inventory declined 11 percent from a year earlier.

Sheep and lamb production in 1988, at 17,336,000 pounds increased almost 2 percent from the previous year. Marketing during 1988, at 19,731,000 pounds declined 9 percent from a year earlier. Prices for sheep and lambs declined from 1987 to 1988. The 1988 sheep price was $30.00 per cwt. compared with $33.30 a year earlier. The lamb price averaged $65.10 per cwt. in 1988 compared with $77.10 in 1987. The number of sheep in Ohio on January 1, 1989 was 246,000 head, a decline of 9 percent from one year earlier. All classes of sheep and lambs were unchanged or lower; most of the reduction took place in the sheep on feed category. Many sheep were culled and sold because of the drought during 1988.

The value per head of the January 1, 1989 sheep and lamb inventory was $95.00, up 15 percent from the value a year earlier of $82.50. The total sheep value at $23,370,000 was up 5 percent on the strength of higher unit values. There were 7,200 operations with sheep, an increase of 100 places in the past year. This includes any place with as few as one sheep or lamb such as for a 4-H project.

Ohio milk production during 1988 totalled 4,835,000,000 pounds, an increase of 20,000,000 pounds from the previous year. The 1988 output per cow was 13,139 pounds. This is another record high, breaking the record 13,014 pounds set in 1987 by 125 pounds. The value of milk produced during 1988 was $582,903,000; down 5 percent from a year earlier. The average price per hundredweight for milk produced in 1988 was $12.06, down 70 cents per hundredweight from a year earlier.

Ohio egg production totalled another record high in 1988 with 4,477,000,000 eggs, an increase of almost 3 percent from 1987. This extends the string of posting consecutive record highs to 11 years. Ohio moved up to fourth position in egg production among the states. Only California, Indiana and Pennsylvania have more eggs produced within their borders. Ohio producers received an average of 37.2 cents per dozen for eggs during 1988, a decline of 2.8 cents from the previous year. The value of egg production in Ohio during 1988 was almost $139 million, down over 4 percent from 1987. The larger output did not entirely offset the lower average price.

The number of turkeys raised during the 1988 production year (September 1, 1987 through August 31, 1988) was 3.6 million; up almost 6 percent from a year earlier. These birds weighed a total of 93,600,000 pounds, a 6 percent increase from a year earlier. Producers received an average of 36 cents per pound in 1988, up from the the 32 cents of the previous year. Value of turkey production in 1988 was $33,696,000, up 19 percent from a year earlier.

Broiler production totalled 51.6 million pounds in 1988, up 9 percent from the 47.3 million pounds produced in 1987. Producers received a liveweight equivalent price of 28.5 cents per pound, up from the year earlier price of 23.0 cents per pound. Value of broiler production during 1988 totalled $14.7 million, up 35 percent from 1987.

The number of bee colonies in Ohio at 50,000, dropped 5,000 from a year earlier and yield per colony declined by 2 pounds. This combination of fewer colonies and lower yield pushed production down 13 percent from a year earlier to 2,400,000 pounds. The dry summer probably had some influence on total honey production because of fewer flowers being available. The stocks on hand December 15, 1988 at 744,000 pounds followed honey production down 13 percent. The price per pound advanced in response to falling production in Ohio. The 1988 price was 76 cents per pound, up 9 cents from a year earlier. Value of production at $1,824,000 declined 1 percent ($19,000), from a year earlier.

CATTLE AND CALVES: NUMBER BY CLASS AND CALF CROP, OHIO AND UNITED STATES
JANUARY 1, 1988 AND 1989

Class	OHIO 1988	OHIO 1989	OHIO 1989 as % 1988	UNITED STATES 1988	UNITED STATES 1989	UNITED STATES 1989 as % 1988
	1,000 head		Percent	1,000 head		Percent
Cattle and calves	1,820	1,760	97	99,254	99,484	100
Cows & heifers that have calved	780	752	96	43,411	43,887	101
Beef cows	412	385	93	33,112	33,669	102
Milk cows	368	367	100	10,298	10,217	99
Heifers 500 pounds and over						
For beef cow replacement	65	70	108	5,227	5,505	105
For milk cow replacement	165	176	107	4,116	4,199	102
Other heifers	100	97	97	7,805	7,627	98
Steers 500 pounds and over	250	241	96	15,732	15,798	100
Bulls 500 pounds and over	40	40	100	2,163	2,221	103
Calves under 500 pounds	420	384	91	21,070	20,248	96
Calf crop 1/	710	695	98	40,086	40,872	102
Cattle on feed	200	200	100	11,527	11,160	97
Number of cattle operation 1/ 2/	43,000	42,000	98	1,408,070	1,370,640	97
Number of beef cow operations 1/ 2/ 3/	25,200	24,300	96	992,710	974,930	98
Number of milk cow operations 1/ 2/ 3/	10,100	9,500	94	232,400	220,880	95
Cattle & Calves value per head ($) 2/	550	620	113	523	607	116
Total Value ($)	1,001,000	1,091,200	109	52,045,643	60,394,509	116

1/ During 1987 and 1988 2/ Whole numbers; not in thousands 3/ Included in cattle operations

CATTLE AND CALVES: INVENTORY AND DISPOSITION, OHIO, 1986-88

Year	On hand January 1	Calves born	Inshipments	Marketings: Cattle	Marketings: Calves	On farm slaughter	Deaths: Cattle	Deaths: Calves
	Thousand head							
1986	1,840	700	115	607	148	5	35	60
1987	1,800	710	120	555	140	5	45	65
1988	1,820	695	50	548	165	7	30	55

CATTLE AND CALVES: PRODUCTION AND INCOME, OHIO, 1986-88

Year	Production	Marketings	Average price per 100 lbs.: Cattle	Average price per 100 lbs.: Calves	Cash receipts	Value of home consumption	Gross income
	Thousand pounds		Dollars		Thousand dollars		
1986	611,370	683,850	50.00	56.30	344,628	16,508	361,136
1987	591,640	624,250	58.60	73.10	371,684	19,476	391,160
1988	582,090	619,470	63.70	86.10	401,289	19,233	420,522

MILK: COWS ON FARMS, MILK PER COW, MILK PRODUCTION, MILKFAT BY MONTHS, OHIO, 1987 AND 1988

Month	Cows on farm		Milk per cow		Milk production		Milkfat-all milk	
	1987	1988	1987	1988	1987	1988	1987	1988
	Thousand head		Pounds		Million pounds		Percent	
January	371	370	1,055	1,075	391	398	3.85	3.86
February	368	368	1,010	1,035	372	381	3.82	3.85
March	370	369	1,110	1,120	411	413	3.78	3.79
April	373	368	1,120	1,115	418	410	3.71	3.72
May	373	370	1,180	1,175	440	435	3.59	3.63
June	372	369	1,120	1,120	417	413	3.51	3.53
July	371	369	1,110	1,110	412	410	3.49	3.48
August	368	367	1,095	1,080	403	396	3.49	3.47
September	370	367	1,045	1,075	387	395	3.62	3.60
October	369	368	1,060	1,085	391	399	3.77	3.71
November	369	367	1,030	1,055	380	387	3.80	3.81
December	369	367	1,065	1,085	393	398	3.83	3.84
Annual	370	368	13,014	13,139	4,815	4,835	3.68	3.69

MILK PRODUCTION AND DISPOSITION, OHIO, 1986-88

Year	Milk used where produced			Milk marketed by producers				Total milk produced
				Sold to plants & dealers		Sold 1/ directly to consumers		
	Fed to calves	Used for milk, cream and butter	Total	As whole milk	As separated cream		Total marketed	
	Million pounds							
1986	40	20	60	4,860	-	16	4,876	4,936
1987	25	20	45	4,755	-	15	4,770	4,815
1988	21	15	36	4,785	-	14	4,799	4,835

1/Includes institutional herds

MILK: QUANTITY MARKETED, PRICE, CASH RECEIPTS AND VALUE, OHIO, 1987 AND 1988

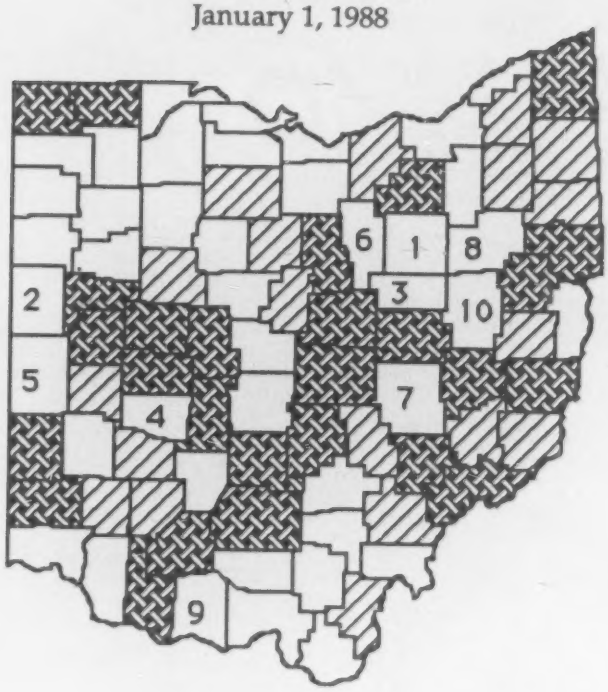
Year	Combined marketings milk & cream			Used for milk, cream & butter where produced		Gross producer income	Value of milk produced
	Milk utilized	Price per 100 lbs.	Cash receipts from marketings	Milk utilized	Value		
	Mil. lbs.	Dollars	1,000 dol.	Mil. lbs.	1,000 dol.	1,000 dol.	1,000 dol.
1987	4,770	12.76	608,420	20	2,551	610,971	614,160
1988	4,799	12.06	578,563	15	1,808	580,371	582,903

MILK COWS: PERCENT OF OPERATIONS AND INVENTORY BY SIZE GROUPS, OHIO, 1986 AND 1987

Item	Size of operation							
	1-29 Head		30-49 Head		50-99 Head		100+ Head	
	1986	1987	1986	1987	1986	1987	1986	1987
	Percent							
Operations	49.0	51.5	18.9	17.8	26.4	23.8	5.7	6.9
Inventory	16.8	16.9	17.8	17.9	45.9	41.3	19.5	23.9

ALL CATTLE

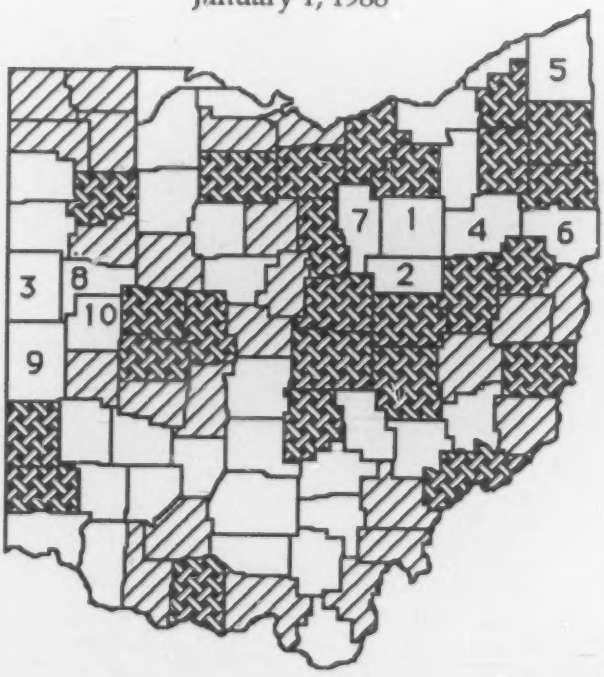
THOUSAND HEAD
January 1, 1988



Symbol	Thousand Head
1-10	31.7 and OVER
	21.0 - 31.6
	13.0 - 20.9
	UNDER 13.0

MILK COWS

THOUSAND HEAD
January 1, 1988



Symbol	Thousand Head
1-10	9.5 and OVER
	3.0 - 9.4
	1.5 - 2.9
	UNDER 1.5

OHIO COUNTY ESTIMATES
ALL CATTLE AND MILK COWS: ON FARMS, JANUARY 1, 1988 - 1989
ALL MILK SOLD TO PLANTS AND DEALERS, OHIO, 1987 - 1988

COUNTY AND DISTRICT	ALL CATTLE AND CALVES JANUARY 1, 1988	ALL CATTLE AND CALVES JANUARY 1, 1989	MILK COWS AND HEIFERS THAT HAVE CALVED JANUARY 1, 1988	MILK COWS AND HEIFERS THAT HAVE CALVED JANUARY 1, 1989	MILK SOLD DURING 1987	MILK SOLD DURING 1988
	HEAD				(MILLION LBS.)	
ALLEN	13,000	12,500	1,600	1,600	19.0	19.0
DEFIANCE	11,500	12,000	2,200	2,300	23.0	24.0
FULTON	28,000	25,800	2,500	2,500	34.0	30.0
HANCOCK	6,500	6,200	1,100	1,100	13.0	12.0
HENRY	9,500	9,200	1,900	1,900	19.0	20.0
LUCAS	1,500	1,300	*	*	*	*
PAULDING	6,000	5,800	*	*	*	*
PUTNAM	13,000	12,500	3,500	3,500	48.0	46.0
VAN WERT	5,000	5,100	1,300	1,400	16.0	17.0
WILLIAMS	24,000	23,300	2,600	2,500	42.0	34.0
WOOD	9,000	9,300	*	*	*	*
DISTRICT 10	127,000	123,000	18,500	18,500	234.0	221.0
ASHLAND	42,000	42,000	12,100	12,500	150.0	156.0
CRAWFORD	17,000	17,500	2,100	2,200	31.0	29.0
ERIE	10,000	10,000	1,700	1,600	14.0	14.0
HURON	12,000	12,700	4,300	4,200	70.0	63.0
LORAIN	15,000	14,500	5,900	6,000	82.0	83.0
OTTAWA	2,000	2,000	*	*	*	*
RICHLAND	22,000	22,000	5,900	5,800	72.0	74.0
SANDUSKY	12,000	11,300	2,000	1,800	19.0	17.0
SENECA	15,000	14,300	3,000	3,000	40.0	39.0
WYANDOT	8,000	7,700	*	*	*	*
DISTRICT 20	155,000	154,000	39,000	39,000	499.0	496.0
ASHTABULA	27,000	26,800	13,500	13,600	158.0	161.0
COLUMBIANA	27,000	27,200	13,100	13,500	160.0	171.0
CUYAHOGA	1,000	900	*	*	*	*
GEAUGA	16,000	15,900	5,100	5,200	63.0	66.0
LAKE	1,000	1,000	*	*	*	*
MAHONING	15,000	14,700	6,500	6,700	73.0	75.0
MEDINA	24,000	24,200	8,000	7,900	108.0	106.0
PORTAGE	15,000	15,400	4,900	4,700	61.0	60.0
STARK	32,000	33,000	14,000	14,200	191.0	199.0
SUMMIT	2,000	1,900	*	*	*	*
TRUMBULL	20,000	20,000	7,300	7,100	97.0	95.0
WAYNE	105,000	105,000	38,000	38,500	536.0	548.0
DISTRICT 30	285,000	286,000	111,000	112,000	1,453.0	1,488.0
AUGLAIZE	30,000	28,800	10,400	10,400	141.0	145.0
CHAMPAIGN	29,000	27,700	5,700	5,800	66.0	66.0
CLARK	48,000	44,000	1,800	1,500	14.0	13.0
DARKE	46,000	43,000	10,300	10,200	142.0	147.0
HARDIN	19,000	18,500	2,800	2,700	32.0	31.0
LOGAN	27,000	26,000	6,400	6,600	99.0	97.0
MERCER	57,000	56,000	18,000	18,200	235.0	290.0
MIAMI	19,000	18,500	2,200	2,100	31.0	32.0
SHELBY	32,000	31,500	9,400	9,500	132.0	134.0
DISTRICT 40	307,000	294,000	67,000	67,000	892.0	955.0
DELAWARE	12,500	11,600	2,100	2,100	29.0	26.0
FAIRFIELD	27,000	25,000	3,300	3,200	45.0	42.0
FAYETTE	11,000	10,300	*	*	*	*
FRANKLIN	7,500	7,000	1,300	1,300	14.0	14.0
KNOX	30,000	28,300	8,500	8,400	108.0	101.0
LICKING	31,000	28,500	5,100	5,100	71.0	64.0
MADISON	23,000	21,000	2,400	2,300	24.0	26.0
MARION	11,000	10,500	1,400	1,300	15.0	16.0
MORROW	16,000	14,800	3,000	2,900	33.0	30.0
PICKAWAY	28,000	26,000	*	*	*	*
ROSS	29,000	27,300	1,300	1,200	16.0	15.0
UNION	26,000	24,700	3,900	3,700	43.0	42.0
DISTRICT 50	252,000	235,000	34,000	33,000	417.0	394.0

OHIO COUNTY ESTIMATES
ALL CATTLE AND MILK COWS: ON FARMS, JANUARY 1, 1988 - 1989

ALL MILK SOLD TO PLANTS AND DEALERS, OHIO, 1987 - 1988

COUNTY AND DISTRICT	ALL CATTLE AND CALVES		MILK COWS AND HEIFERS THAT HAVE CALVED		MILK SOLD DURING	
	JANUARY 1, 1988	JANUARY 1, 1989	JANUARY 1, 1988	JANUARY 1, 1989	1987	1988
BELMONT	28,000	28,200	3,500	3,400	40.0	40.0
CARROLL	28,600	29,300	6,500	6,300	69.0	68.0
COSHOCTON	23,000	22,800	5,000	4,800	64.0	60.0
HARRISON	17,000	18,600	2,500	2,600	35.0	38.0
HOLMES	52,000	51,000	24,000	23,000	282.0	254.0
JEFFERSON	11,000	11,400	1,400	1,500	24.0	23.0
TUSCARAWAS	31,000	31,700	9,100	9,400	153.0	170.0
DISTRICT 60	190,000	193,000	52,000	51,000	667.0	653.0
BUTLER	26,000	24,000	3,300	3,600	44.0	43.0
CLERMONT	9,000	8,300	*	*	*	*
CLINTON	15,000	13,700	1,300	1,300	17.0	18.0
GREENE	20,000	18,300	*	*	*	*
HAMILTON	5,000	4,600	*	*	*	*
MONTGOMERY	10,000	8,500	1,400	1,400	21.0	20.0
PREBLE	27,000	25,200	3,100	3,100	46.0	46.0
WARREN	18,000	17,400	1,500	1,300	19.0	18.0
DISTRICT 70	130,000	120,000	13,000	13,000	179.0	177.0
ADAMS	33,000	32,500	4,600	4,500	53.0	51.0
BROWN	26,000	24,000	2,600	2,500	26.0	25.0
GALLIA	22,000	20,500	2,200	2,300	28.0	28.0
HIGHLAND	25,000	24,700	2,700	2,700	31.0	30.0
JACKSON	13,000	12,800	*	*	*	*
LAWRENCE	10,000	9,500	*	*	*	*
PIKE	13,000	12,500	*	*	*	*
SCIOTO	12,000	11,500	1,700	1,900	25.0	27.0
DISTRICT 80	154,000	148,000	16,000	16,000	186.0	182.0
ATHENS	16,000	15,500	1,500	1,600	22.0	22.0
GUERNSEY	26,000	25,200	2,000	1,800	26.0	22.0
HOCKING	6,500	6,100	*	*	*	*
MEIGS	14,000	12,600	2,000	1,800	19.0	17.0
MONROE	21,000	19,500	2,700	2,800	30.0	29.0
MORGAN	25,000	23,700	1,500	1,400	20.0	20.0
MUSKINGUM	40,000	37,000	3,000	3,200	43.0	42.0
NOBLE	17,000	16,000	*	*	*	*
PERRY	15,000	14,500	1,000	1,100	15.0	14.0
VINTON	8,500	7,900	*	*	*	*
WASHINGTON	31,000	29,000	3,000	3,100	45.0	45.0
DISTRICT 90	220,000	207,000	17,500	17,500	228.0	219.0
STATE	1,820,000	1,760,000	368,000	367,000	4,755.0	4,785.0

*Counties with less than 1,00 head not published. Counties with more than 1,000 head are also unpublished, if necessary, to preserve the confidentiality of counties with less than 1,000 head.

MANUFACTURED DAIRY PRODUCTS: PRODUCTION BY MONTHS, OHIO, 1987 AND 1988

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
						American cheese - thousand pounds							
1987	1,870	1,439	1,755	1,852	2,677	1,977	1,643	1,408	1,108	1,707	1,495	1,676	20,607
1988	1,218	1,161	1,393	1,504	2,150	1,362	1,158	1,066	1,384	1,313	1,155	1,870	16,734
						Swiss cheese - thousand pounds							
1987	4,207	4,266	4,964	5,080	5,635	5,276	4,983	4,626	4,482	4,727	4,292	5,015	57,553
1988	4,861	4,806	4,700	4,932	5,497	5,441	5,371	5,337	4,889	4,869	4,405	4,706	59,814
						All cheese - thousand pounds							
1987	7,631	7,322	8,427	8,531	9,899	8,896	8,075	7,540	7,350	8,161	7,510	8,611	97,953
1988	7,846	7,758	8,345	8,102	9,349	8,504	7,968	8,063	7,959	8,028	7,195	8,309	97,426
						Cottage cheese curd - thousand pounds							
1987	1,858	2,007	2,268	2,224	2,155	2,196	2,097	1,988	2,239	2,068	1,998	1,684	24,782
1988	1,838	2,025	2,471	1,570	1,815	1,910	1,854	2,161	1,755	1,634	1,557	1,571	22,161
						Cottage cheese, lowfat - thousand pounds							
1987	1,232	1,327	1,374	1,427	1,325	1,440	1,298	1,280	2,149	1,341	1,327	905	16,425
1988	1,259	1,361	1,592	1,012	1,144	1,536	1,828	1,564	1,280	1,227	1,088	1,256	16,147
						Cottage cheese, creamed - thousand pounds							
1987	3,224	3,486	3,963	3,853	3,648	3,728	3,780	3,416	3,833	3,248	3,285	3,015	42,479
1988	3,142	3,414	3,985	2,729	4,139	3,393	3,367	4,049	3,230	2,983	2,999	3,184	40,614
						Ice cream mix - thousand gallons							
1987	1,585	1,734	2,246	2,033	2,232	2,772	2,535	2,364	2,152	1,637	1,451	1,644	24,385
1988	1,352	1,794	2,072	2,079	2,162	2,682	2,295	2,287	1,923	1,616	1,322	1,504	2,308
						Ice Milk Mix- thousand gallons							
1987	320	352	604	676	861	998	951	812	596	372	296	255	7,093
1988	306	324	547	686	899	1,033	880	843	515	366	278	273	6,950
						Milk sherbet mix - thousand gallons							
1987	106	103	144	182	174	285	289	179	168	121	101	161	2,013
1988	109	138	183	182	203	274	230	200	120	117	97	142	1,995
						Ice Cream - thousand gallons							
1987	2,861	3,236	3,805	3,770	3,749	4,980	4,481	4,240	3,729	3,248	2,602	3,103	43,804
1988	2,496	3,374	3,569	3,734	3,848	4,833	4,132	4,025	3,416	3,142	2,358	2,687	41,615
						Ice milk - thousand gallons							
1987	505	555	854	963	1,153	1,403	1,332	1,183	879	562	483	439	10,311
1988	544	631	1,000	1,284	1,556	1,816	1,670	1,558	1,010	756	537	637	12,999
						Milk sherbet - thousand gallons							
1987	175	164	219	255	281	364	353	329	225	178	157	255	2,955
1988	150	208	243	234	262	327	272	226	183	186	148	198	2,637
						Water ices - thousand gallons							
1987	135	210	101	84	227	257	116	364	374	118	153	56	2,195
1988	36	45	213	85	51	162	156	115	31	24	18	17	953

ALL HOGS AND PIGS: QUARTERLY INVENTORY, BY CLASSES, OHIO 1987 AND 1988, U.S. 1988

Year and quarter	Total hogs	Breeding hogs	Market hogs and pigs				
			Under 60 lbs.	60-119 lbs.	120-179 lbs.	180 lbs. and over	Total
	Thousand head						
OHIO							
March 1, 1987	1,880	260	605	375	370	270	1,620
June 1, 1987	2,100	280	820	415	330	255	1,820
September 1, 1987	2,200	285	775	450	400	290	1,915
December 1, 1987	2,150	290	680	490	375	315	1,860
March 1, 1988	2,000	285	670	385	385	275	1,715
June 1, 1988	2,300	310	900	450	365	275	1,990
September 1, 1988	2,300	300	800	475	425	300	2,000
December 1, 1988	2,210	295	720	480	395	320	1,915
UNITED STATES							
March 1, 1988	52,345	7,120	17,675	10,730	9,135	7,685	45,225
June 1, 1988	56,265	7,530	20,915	12,015	8,800	7,005	48,735
September 1, 1988	58,200	7,260	19,635	12,685	10,430	8,190	50,940
December 1, 1988	55,299	7,040	17,875	12,399	10,016	7,969	48,259

HOGS: INVENTORY NUMBER, PIG CROP, AND DISPOSITION, OHIO, 1986-88

Year	December 1 inventory 1/	Pig crop		Inshipments	Marketings 2/	Farm 3/ slaughter	Deaths
		Dec.-May	Jun.-Nov.				
	Thousand head						
1986	1,980	1,501	1,594	211.4	3,094.4	7	185
1987	2,000	1,640	1,772	197.3	3,251.3	8	200
1988	2,150	1,841	1,827	206.0	3,591.0	13	210

1/December 1 previous year. 2/Excludes interfarm sales. 3/Excludes custom slaughter for farmers at commercial establishments.

HOGS: PRODUCTION AND INCOME, OHIO, 1986-88

Year	Production	Marketings	Price per cwt.	Cash receipts	Value of home consumption	Gross income
	Thousand pounds		Dollars	Thousand dollars		
1986	739,723	740,571	49.50	366,719	1,560	368,279
1987	789,769	775,712	51.00	395,847	2,698	398,545
1988	892,097	891,691	42.20	376,575	3,184	379,759

SOW FARROWINGS, PIGS PER LITTER, AND PIG CROP, OHIO, 1987 AND 1988

Year	December-May pig crop 1/			June-November pig crop		
	Sows farrowing	Pigs/litter	Pig crop	Sows farrowing	Pigs/litter	Pig crop
	Thou. head	Head	Thou. head	Thou. head	Head	Thou. head
1987	215	7.63	1,640	230	7.70	1,772
1988	240	7.67	1,841	236	7.74	1,827

1/December previous year.

HOGS AND PIGS: PERCENT OF OPERATIONS AND INVENTORY BY SIZE GROUP, OHIO, 1987 AND 1988

Item	Size of operation					
	1-99		100-499		500+	
	1987	1988	1987	1988	1987	1988
	Percent					
Operations	69.7	68.7	23.4	23.3	6.9	8.0
Inventory	13.8	12.0	36.2	33.0	50.0	55.0

Sheep: Number by classes, value per head and total value, lamb crop, and number of sheep operations, Ohio and U.S., January 1, 1988-89

Class	Ohio			United States		
	1988	1989	1989/88	1988	1989	1989/88
	1,000 head		Percent	1,000 head		Percent
All sheep & lambs 1/	270.0	246.0	91	10,784.4	10,802.1	100
On feed	60.0	46.0	77	1,644.0	1,613.0	98
Stock sheep	210.0	200.0	95	9,140.4	9,189.1	101
Lambs						
Ewes	27.0	24.0	89	1,282.0	1,337.6	104
Wethers & rams	5.0	4.0	80	331.7	345.1	104
1 year old & older						
Ewes	170.0	165.0	97	7,191.7	7,173.4	100
Wethers & rams	8.0	7.0	88	335.0	333.0	99
New crop lambs 2/	10.0	10.0	100	853.8	821.3	96
	Dollars			Dollars		
All sheep & lambs - value per head 3/	82.50	95.00	115	90.00	82.40	92
	1,000 dollars			1,000 dollars		
All sheep and lambs - total value 3/	22,275	23,370	105	970,484	889,765	92
	1,000 head			1,000 head		
Lamb crop 4/	205.0	195.0	95	7,189.7	7,123.1	99
	Number			Number		
Operations with sheep 5/	7,100	7,200	101	114,840	115,490	101

1/New crop lambs are not included in sheep and lamb inventory estimates in this report. 2/Includes all lambs born after September 30 previous year that are on hand January 1. 3/Based on reporters' estimates of average price per head in their localities. 4/Lamb crop is lambs born in the Native States plus lambs docked or branded in the Western States for the period October 1-September 30. 5/An operation is any place having one or more sheep on hand at any time during the year.

SHEEP: INVENTORY AND DISPOSITION, OHIO, 1987-88

Year	Inventory January 1	Lamb crop	Inshipments	Marketings: Sheep	Marketings: Lambs	Farm slaughter	Deaths: Sheep	Deaths: Lambs
	Thousand head							
1987	300	205	6	58	145	4	12	22
1988	270	195	2	52.5	134.5	1	13	20

SHEEP: PRODUCTION AND INCOME, OHIO, 1986-88

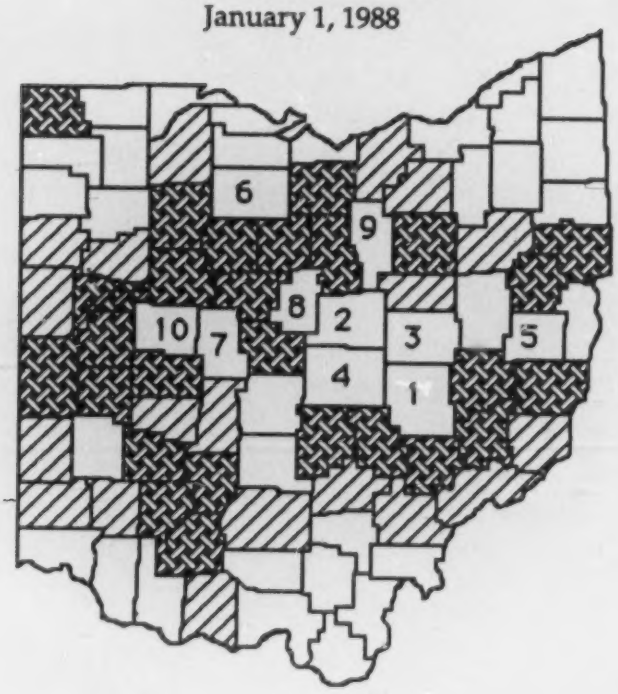
Year	Production	Marketings	Average price per cwt.: Sheep	Average price per cwt.: Lambs	Cash receipts	Value of home consumption	Gross income
	Thousand pounds		Dollars		Thousand dollars		
1986	20,015	16,820	37.30	68.00	11,217	249	11,466
1987	17,060	21,568	33.30	77.10	13,533	235	13,768
1988	17,336	19,731	30.00	65.10	10,623	79	10,702

WOOL: PRODUCTION AND VALUE, OHIO, 1986-88

Year	Sheep shorn	Weight per fleece	Production	Price per pound	Value
	Thousand head	Pounds	Thousand pounds	Cents	Thousand dollars
1986	270	7.2	1,956	46	900
1987	273	7.2	1,959	54	1,058
1988	260	7.1	1,845	71	1,310

STOCK SHEEP

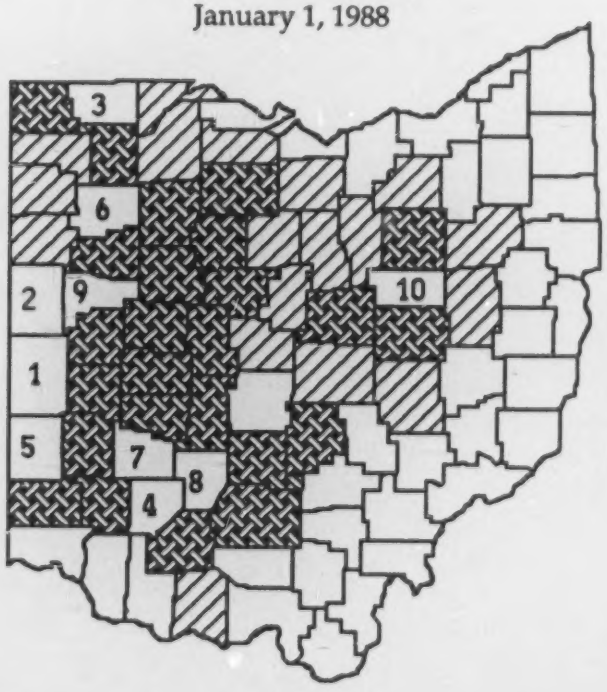
THOUSAND HEAD
January 1, 1988



Symbol	Thousand Head
1-10	4.6 and OVER
	2.0 - 4.5
	1.0 - 1.9
	UNDER 1.0

HOGS AND PIGS

THOUSAND HEAD
January 1, 1988



Symbol	Thousand Head
1-10	54.0 and OVER
	26.0 - 53.9
	10.0 - 25.9
	UNDER 10.0

OHIO COUNTY ESTIMATES - HOGS AND PIGS: NUMBER ON FARMS, DECEMBER 1, 1987 - 1988

STOCK SHEEP: NUMBER ON FARMS, JANUARY 1, 1988 - 1989

COUNTY & DISTRICT	HOGS AND PIGS DECEMBER 1, 1987	HOGS AND PIGS DECEMBER 1, 1988	STOCK SHEEP & LAMBS JANUARY 1, 1988	STOCK SHEEP & LAMBS JANUARY 1, 1989
			HEAD	
ALLEN	40,000	42,000	2,100	1,900
DEFIANCE	23,000	23,500	*	*
FULTON	95,000	97,000	*	*
HANCOCK	31,000	33,000	4,000	3,700
HENRY	35,000	36,000	*	*
LUCAS	13,000	13,600	*	*
PAULDING	10,000	10,300	*	*
PUTNAM	77,000	80,000	*	*
VAN WERT	20,000	20,600	1,780	1,600
WILLIAMS	36,000	37,200	2,200	2,100
WOOD	20,000	20,800	1,200	1,100
DISTRICT 10	400,000	414,000	15,000	13,800
ASHLAND	24,000	25,000	5,300	5,000
CRAWFORD	24,000	25,400	3,400	3,100
ERIE	4,500	4,600	1,000	900
HURON	17,000	17,400	2,900	2,800
LORAIN	5,500	5,500	1,200	1,100
OTTAWA	7,000	7,800	*	*
RICHLAND	24,000	24,500	2,500	2,500
SANDUSKY	20,000	20,300	*	*
SENECA	32,000	32,000	6,100	5,900
WYANDOT	29,000	28,500	3,100	2,800
DISTRICT 20	187,000	191,000	26,900	25,500
ASHTABULA	7,000	6,800	*	*
COLUMBIANA	9,000	8,400	2,400	2,200
CUYAHOGA	*	*	*	*
GEAUGA	3,500	3,500	*	*
LAKE	*	*	*	*
MAHONING	6,000	6,300	*	*
MEDINA	13,000	12,500	1,800	1,700
PORTAGE	4,500	5,000	*	*
STARK	12,000	12,500	1,600	1,600
SUMMIT	*	*	*	*
TRUMBULL	3,000	3,000	*	*
WAYNE	51,000	50,000	3,800	3,600
DISTRICT 30	110,000	109,000	14,000	13,200
AUGLAIZE	52,000	55,000	2,800	2,600
CHAMPAIGN	27,000	27,000	3,000	2,800
CLARK	38,000	40,000	1,100	1,100
DARKE	124,000	128,000	2,800	2,800
HARDIN	40,000	40,000	4,200	4,100
LOGAN	25,000	26,000	4,700	4,600
MERCER	93,000	103,000	1,600	1,500
MIAMI	40,000	42,000	2,600	2,400
SHELBY	51,000	51,000	2,200	2,100
DISTRICT 40	490,000	512,000	25,000	24,000
DELAWARE	23,000	24,000	2,500	2,300
FAIRFIELD	42,000	42,000	3,500	3,300
FAYETTE	58,000	60,000	2,700	2,600
FRANKLIN	8,000	8,100	*	*
KNOX	30,000	31,400	10,300	10,000
LICKING	19,000	18,500	7,500	7,200
MADISON	47,000	49,000	2,100	1,900
MARION	31,000	30,000	3,800	3,600
MORROW	22,000	23,000	5,500	5,300
PICKAWAY	42,000	43,000	*	*
ROSS	26,000	27,000	1,800	1,600
UNION	37,000	37,000	5,400	5,600
DISTRICT 50	385,000	393,000	48,000	46,000

OHIO COUNTY ESTIMATES
HOGS AND PIGS: NUMBER ON FARMS, DECEMBER 1, 1987 - 1988

STOCK SHEEP: NUMBER ON FARMS, JANUARY 1, 1988 - 1989

COUNTY & DISTRICT	HOGS AND PIGS DECEMBER 1, 1987	HOGS AND PIGS DECEMBER 1, 1988	STOCK SHEEP & LAMBS JANUARY 1, 1988	STOCK SHEEP & LAMBS JANUARY 1, 1989
		HEAD		
BELMONT	*	*	2,300	2,300
CARROLL	3,500	3,700	2,200	2,200
COSHOCTON	28,000	28,000	9,200	8,800
HARRISON	*	*	7,000	6,800
HOLMES	52,000	54,000	1,800	1,700
JEFFERSON	3,000	2,900	*	*
TUSCARAWAS	11,000	11,000	*	*
DISTRICT 60	100,000	102,000	25,500	24,800
BUTLER	26,000	27,000	1,300	1,200
CLERMONT	*	*	*	*
CLINTON	93,000	95,000	2,400	2,300
GREENE	75,000	80,000	2,300	2,300
HAMILTON	*	*	*	*
MONTGOMERY	30,000	30,000	*	*
PREBLE	76,000	81,000	1,600	1,500
WARREN	25,000	27,000	1,100	1,100
DISTRICT 70	330,000	345,000	10,300	9,800
ADAMS	17,000	17,200	1,200	1,100
BROWN	8,000	7,600	*	*
GALLIA	4,000	3,700	*	*
HIGHLAND	43,000	41,000	3,500	3,600
JACKSON	5,000	4,500	*	*
LAWRENCE	*	*	*	*
PIKE	8,000	8,200	*	*
SCIOTO	*	*	*	*
DISTRICT 80	88,000	85,000	7,800	7,500
ATHENS	2,500	2,300	1,200	1,200
GUERNSEY	3,500	3,700	2,300	2,100
HOCKING	3,000	2,800	1,500	1,400
MEIGS	2,000	1,900	*	*
MONROE	2,000	2,200	1,600	1,600
MORGAN	6,000	5,800	2,400	2,300
MUSKINGUM	24,000	24,000	18,500	17,500
NOBLE	2,000	2,100	3,600	3,400
PERRY	6,000	5,800	3,500	3,300
VINTON	2,500	2,200	*	*
WASHINGTON	6,500	6,200	2,000	1,800
DISTRICT 90	60,000	59,000	37,500	35,400
STATE	2,150,000	2,210,000	210,000	200,000

*Counties with less than 1,000 head not published. Counties with more than 1,000 head are also unpublished, if necessary, to preserve the confidentially of counties with less than 1,000 head.

OPERATIONS WITH CATTLE, MILK COWS, HOGS OR SHEEP, OHIO, 1984-88

Year	All farms	Operations with			
		All cattle	Milk cows	Hogs	Sheep
1984	90,000	45,000	11,300	15,000	7,500
1985	89,000	45,000	11,000	15,000	7,400
1986	88,000	44,000	10,600	14,000	7,500
1987	84,000	43,000	10,100	14,500	7,100
1988	84,000	42,000	9,500	15,000	7,200

STOCKS IN COLD STORAGE, EAST NORTH CENTRAL(ENC) 1/ AND 48 STATES, END OF MONTH, 1987-88

Month	ENC		48 States		ENC		48 States		ENC		48 States	
	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988
						1,000 pounds						
	American Cheese				Swiss Cheese				Butter			
Jan.	208,229	154,713	590,341	364,861	4,754	4,150	11,982	9,086	38,014	28,031	206,613	157,318
Feb.	194,092	154,088	564,290	359,900	4,275	4,120	10,751	10,056	49,660	54,681	231,603	198,851
Mar.	194,191	146,533	557,083	354,099	4,757	5,190	12,071	9,231	58,388	56,858	253,967	221,115
Apr.	202,470	157,541	553,304	359,190	4,870	5,782	10,676	10,240	50,284	71,501	247,892	240,404
May	216,318	154,446	569,441	366,701	4,999	5,925	11,692	10,582	50,069	89,961	251,087	280,540
Jun.	221,352	166,401	564,678	381,895	4,992	7,348	11,226	11,563	46,409	88,504	237,912	293,350
Jul.	223,799	171,030	546,089	388,357	5,278	5,713	11,671	9,635	35,184	91,839	211,210	295,767
Aug.	209,453	161,065	509,692	351,089	5,298	5,820	11,434	8,750	28,975	79,349	187,266	294,447
Sep.	199,585	144,915	485,301	314,832	5,448	5,285	11,381	7,119	27,358	51,364	176,200	253,415
Oct.	176,398	134,957	441,158	293,249	5,764	5,677	13,992	9,159	27,212	44,238	165,553	237,330
Nov.	158,549	127,951	403,351	260,832	4,413	5,342	10,991	10,266	27,028	38,105	158,486	226,176
Dec.	153,295	131,270	367,411	283,415	4,323	5,569	9,961	9,932	19,071	27,947	143,212	214,687
	Eggs, Frozen				Broilers,fryers				Whole Turkeys			
Jan.	2,743	4,377	14,296	18,293	5,978	6,042	27,175	32,967	17,093	20,860	118,323	163,548
Feb.	2,614	4,018	13,481	18,321	5,379	6,321	23,501	32,305	22,359	21,886	137,531	193,712
Mar.	2,832	2,946	14,459	14,104	5,420	6,743	25,090	35,504	19,287	22,323	154,467	214,040
Apr.	2,902	4,209	14,892	17,333	5,882	6,691	26,907	40,845	22,560	25,440	181,099	232,451
May	3,558	5,201	17,371	20,306	5,892	6,242	27,011	39,484	25,567	26,688	220,238	272,317
Jun.	3,561	7,302	16,917	25,333	5,379	6,511	24,350	41,231	33,751	33,961	288,242	321,733
Jul.	4,081	6,434	17,315	22,861	5,629	5,566	24,829	43.836	48,241	45,641	364,317	356,706
Aug.	3,559	6,071	17,485	24,520	5,615	4,897	24,736	31,096	66,382	58,337	438,250	415,069
Sep.	3,237	4,891	16,467	22,225	6,028	5,236	28,267	32,004	82,035	66,387	507,949	436,495
Oct.	3,342	4,375	17,928	20,015	6,046	5,320	27,277	34,568	82,318	64,283	491,468	431,962
Nov.	3,329	3,258	17,359	17,934	5,638	5,520	24,105	35,273	24,043	19,265	210,328	191,811
Dec.	3,847	3,582	17,274	19,639	5,562	5,401	24,814	35,882	15,382	11,748	166,155	139,295
	Frozen beef, boneless				Frozen beef cuts				Frozen pork-picnics			
Jan	39,021	46,055	284,393	295,607	3,241	2,471	36,215	21,086	444	505	4,081	5,786
Feb.	38,882	46,132	271,229	304,[illegible]	3,179	2,810	34,759	21,211	353	471	3,321	7,719
Mar.	46,240	41,166	277,151	295,286	3,346	2,372	33,981	17,896	775	629	5,766	8,303
Apr.	44,232	37,451	281,342	286,709	2,968	2,168	30,939	18,306	731	1,596	5,756	11,176
May	42,164	34,262	252,920	258,220	3,227	2,297	27,180	16,898	800	1,178	6,779	9,233
Jun.	39,421	32,439	234,186	232,047	3,224	2,026	18,546	16,369	700	771	4,846	6,402
Jul.	45,206	34,916	252,809	249,973	3,278	2,454	25,852	19,641	613	976	3,997	5,771
Aug.	41,193	34,107	242,638	272,261	3,691	2,504	26,635	22,643	197	213	3,204	3,378
Sep.	43,092	34,043	261,744	282,308	2,264	2,199	24,767	25,275	181	206	3,550	3,530
Oct.	46,582	33,894	279,505	268,792	2,137	2,582	28,114	27,693	264	299	4,410	4,578
Nov.	45,902	36,682	278,218	273,002	2,372	2,921	26,092	27,405	329	867	6,442	5,513
Dec.	42,498	38,725	269,228	289,722	2,338	3,196	19,423	27,740	379	724	5,732	3,665
	Hams				Bellies				Loins			
Jan.	6,053	3,920	20,791	18,450	10,227	14,176	34,900	62,996	2,816	4,186	9,217	18,149
Feb.	7,050	4,480	24,633	25,895	9,883	16,167	34,717	67,035	2,896	4,432	9,165	18,419
Mar.	3,651	3,119	16,302	20,433	10,942	21,518	41,821	90,347	2,961	5,021	9,716	20,185
Apr.	2,231	10,210	11,287	51,787	13,395	25,531	50,482	102,543	2,635	4,398	8,566	15,753
May	3,421	12,163	19,943	64,697	14,954	28,221	58,245	111,484	2,199	3,341	6,539	12,133
Jun.	3,812	12,130	20,311	68,979	12,590	25,912	47,367	103,401	2,002	3,398	6,996	10,817
Jul.	6,998	13,187	26,137	69,981	7,020	18,151	28,649	73,747	1,882	3,235	6,108	10,216
Aug.	7,150	14,249	29,435	72,730	3,818	11,959	18,938	42,623	1,860	3,194	7,275	8,841
Sep.	8,084	13,110	35,827	74,111	2,543	10,130	12,620	31,054	2,459	4,357	8,995	11,133
Oct.	8,993	13,455	32,654	68,655	3,340	15,179	14,850	49,550	2,874	4,339	9,217	11,494
Nov.	6,060	7,707	23,487	39,633	8,420	28,476	35,487	93,254	4,148	5,387	14,243	14,272
Dec.	2,392	3,470	9,562	16,356	14,655	35,460	62,089	113,137	5,274	4,629	19,722	14,852
	Veal				Lamb and Mutton				Canned hams			
Jan.	3,566	2,139	6,859	4,889	761	686	11,550	8,069	6,329	6,670	30,711	32,980
Feb.	3,774	1,900	6,947	4,592	563	547	13,565	6,190	7,348	7,564	35,300	36,427
Mar.	3,262	2,015	6,049	4,923	646	465	13,595	7,056	5,898	7,566	36,384	36,543
Apr.	2,987	2,049	5,992	4,746	655	460	13,248	7,639	5,634	8,322	31,909	38,480
May	2,323	1,968	4,619	4,554	752	517	13,997	8,018	6,057	8,235	32,908	38,266
Jun.	2,118	1,564	4,378	4,361	843	560	12,007	8,738	5,842	8,325	31,684	39,712
Jul.	2,062	1,413	4,482	3,968	566	296	9,311	8,537	7,178	9,495	34,622	44,475
Aug.	1,906	1,083	4,038	3,483	754	312	8,468	7,253	6,750	8,586	31,047	37,247
Sep.	1,760	1,148	3,639	3,435	598	326	6,978	6,827	6,513	7,892	32,944	33,996
Oct.	2,017	1,318	4,278	3,499	596	374	7,036	6,396	8,852	8,487	36,711	32,278
Nov.	1,908	1,884	4,754	4,657	573	385	8,637	6,001	7,278	6,402	35,028	24,377
Dec.	1,814	2,565	4,157	5,440	455	421	7,949	6,115	5,564	6,067	27,091	24,366

1/States included are: Ohio, Indiana, Illinois, Michigan, and Wisconsin. Data are collected from warehouses normally holding commodities for 30 days or more.

COMMERCIAL SLAUGHTER: BY MONTH, OHIO, 1987 AND 1988 1/

Month	Number of head		Average liveweight		Number of head		Average liveweight	
	1987	1988	1987	1988	1987	1988	1987	1988
	Thousands		Pounds		Thousands		Pounds	
	Cattle				Calves			
January	48.0	35.0	1,122	1,137	9.1	11.8	367	191
February	37.5	32.0	1,125	1,129	7.2	11.1	308	217
March	39.9	33.3	1,133	1,096	7.3	10.6	284	179
April	38.8	31.6	1,130	1,109	7.5	8.5	323	208
May	38.6	35.0	1,116	1,109	7.6	9.7	359	237
June	42.2	37.4	1,108	1,107	8.8	14.9	376	194
July	41.8	36.4	1,113	1,110	6.5	15.6	305	169
August	40.1	38.1	1,121	1,107	7.6	13.8	301	176
September	41.5	35.0	1,114	1,110	9.6	12.1	276	174
October	42.7	36.9	1,114	1,113	12.1	10.7	241	192
November	42.4	40.0	1,114	1,120	12.6	10.5	194	159
December	38.5	33.3	1,130	1,122	13.2	11.9	199	167
Annual	492.3	423.9	1,120	1,114	109.2	141.1	284	187
	Hogs				Sheep			
January	274.1	223.9	246	251	1.4	1.1	87	112
February	244.7	218.7	245	251	1.1	1.0	98	108
March	272.4	252.5	243	252	1.2	2.6	101	98
April	261.5	227.7	244	251	5.7	2.8	88	90
May	246.2	242.5	244	251	1.4	2.1	92	108
June	243.8	248.6	243	252	2.0	2.5	92	107
July	206.7	228.6	245	251	2.1	2.4	102	108
August	194.9	260.7	247	250	2.4	2.7	105	103
September	220.6	269.7	249	249	2.2	2.4	106	102
October	232.5	281.5	249	248	1.3	2.2	108	105
November	227.5	279.1	251	252	1.6	2.0	111	106
December	249.6	275.0	250	249	1.5	1.5	111	106
Annual	2,874.4	3,008.4	246	251	23.9	25.2	98	103

1/Includes slaughter in federally inspected and in other slaughter plants, but excludes animals slaughtered on farms. Total may not add due to rounding.

MINK: FEMALES BRED AND MINK PRODUCTION, OHIO, 1985-87

Year	Standard	Pastel	Sapphire	Pearl	Violet-type	Demi-buff 1/	Misc. Unclassified	Total	Number of ranches
	Thousand females bred								
1985	18.0	4.0	2.8	3.7	1.3	2.9	6.5	39.2	
1986	17.8	1.9	0.9	0.3	1.1	3.9	6.9	32.8	
1987	19.7	1.6	0.7	2/		4.5	6.5	33.0	
1988	20.6	1.0	0.2		0.3	3.9	7.4	33.4	
	Thousand pelts produced								
1985	50.5	15.8	9.1	9.6	3.7	23.2	25.3	137.2	36
1986	55.1	8.3	3.3	2.1	2.5	22.4	19.3	113.0	27
1987	54.9	5.6	4.8	0.3	1.4	25.3	28.1	120.4	24

1/This color class includes females bred to produce demi-buff, dark brown, violet, pastel, standard and pearl crosses and others. 2/ Included in total to avoid disclosing individual operations.

CHICKENS: INVENTORY BY CLASSES, OHIO AND UNITED STATES, DECEMBER 1, 1986-88

	Ohio			United States		
	1986	1987	1988	1986	1987	1988
	Thousands					
Hens 1 year and older	6,350	9,000	7,000	125,040	124,743	122,779
Pullets of laying age	9,550	8,600	10,450	154,900	161,021	152,573
Pullets not of laying age, over 3 months old	1,950	3,700	2,740	40,225	41,028	33,327
Pullets under 3 months old	2,900	3,200	2,780	41,746	44,457	40,789
Other chickens	100	100	30	7,220	6,478	6,021
Total 1/	20,850	24,600	23,000	369,131	377,727	355,489
All chickens, value per head 2/	1.45	1.40	1.30	1.87	1.87	2.04
Total value 1/	30,233	34,440	29,900	690,818	706,131	725,016

1/ Excludes commercial broilers. 2/ Dollars per head.

CHICKENS: INVENTORY, DISPOSITION, AND INCOME 1/, OHIO AND UNITED STATES, 1987 AND 1988

	Ohio		United States	
	1987	1988	1987	1988
	Thousands			
Lost 2/	1,900	2,100	36,479	37,204
Sold	11,200	11,270	216,487	224,458
All chickens current December 1	24,600	23,000	377,727	355,489
Pounds sold	40,320	40,572	1,019,376	1,047,031
Price per pound (cents)	9.0	12.2	11.0	9.2
Value of sales (dollars)	3,629	4,950	112,129	96,346

1/ Data cover both farm and commercial operations, but exclude commercial broilers for the 12 month period, Oct 1, previous year through Nov 30. 2/ Includes death and other losses during the 12 month period.

AVERAGE NUMBER OF LAYERS ON HAND AND EGGS PRODUCED BY MONTHS, OHIO 1987 AND 1988

Month	Layers		Eggs per 100 layers		Eggs produced	
	1987	1988	1987	1988	1987	1988
	Thousands		Number		Millions	
December 1/	16,135	17,500	2,262	2,274	365	398
January	16,470	17,790	2,240	2,254	369	401
February	16,405	18,070	2,024	2,075	332	375
March	16,210	17,800	2,270	2,213	368	394
April	16,115	17,640	2,184	2,143	352	378
May	16,445	17,020	2,189	2,209	360	376
June	16,690	16,265	2,097	2,127	350	346
July	16,665	16,155	2,172	2,160	362	349
August	16,855	16,270	2,183	2,145	368	349
September	17,135	16,703	2,101	2,119	360	354
October	17,350	17,091	2,202	2,235	382	382
November	17,475	17,293	2,192	2,169	383	375
Total	16,662 2/	17,129 2/	261 3/	261 3/	4,351	4,477

1/ December preceding year. 2/ Average per year. 3/ Total egg production divided by average number of layers on hand.

EGGS: PRODUCTION, DISPOSITION AND INCOME, OHIO AND UNITED STATES, 1987 AND 1988

	Ohio		United States	
	1987	1988	1987	1988
Eggs produced (million eggs)	4,351	4,477	69,351	69,476
Price per dozen (cents)	40.0	37.2	54.9	52.8
Value of production (1,000 dollars)	145,033	138,787	3,178,185	3,058,998

BROILERS: PRODUCTION AND GROSS INCOME, OHIO AND UNITED STATES, 1987 AND 1988 1/

	Ohio		United States 2/	
	1987	1988	1987	1988
Number produced (thousand head)	11,000	12,000	5,002,934	5,185,605
Pounds produced (thousand pounds)	47,300	51,600	21,520,242	22,235,151
Price per pound (cents) 3/	23.0	28.5	28.7	33.1
Value of production (thousand dollars) 4/	10,879	14,706	6,175,721	7,363,151

1/Broiler production including other meat-type breeds. 2/Excludes States producing less than 500,000 birds. 3/ Live weight equivalent price. 4/ Includes home consumption.

TURKEYS: PRODUCTION AND GROSS INCOME, OHIO AND UNITED STATES, 1987 AND 1988

	Ohio		United States	
	1987	1988	1987	1988
Heavy and light breeds raised (thousand head)	3,400	3,600	240,389	242,023
Pounds produced (thousand pounds) 1/	88,400	93,600	4,893,707	5,069,466
Price per pound (cents) 2/	32.0	36.0	34.8	38.6
Value of production (thousand dollars) 3/	28,288	33,696	1,702,784	1,954,750

1/Based on turkeys hatched September 1, previous year through August 31, current year. Excludes young turkeys lost. 2/ Includes home consumption. 3/Live weight equivalent price.

CHICKENS: NUMBER OF HENS AND PULLETS OF LAYING AGE
DECEMBER 1, OHIO, 1984-88

District	HENS AND PULLETS OF LAYING AGE				
	1984	1985	1986	1987	1988
	Thousands				
10	1,860	1,750	1,400	1,650	1,410
20	250	250	250	260	220
30	1,200	1,250	1,050	870	750
40	5,050	5,450	6,400	7,750	7,900
50	4,950	5,600	5,760	5,530	5,770
60	320	320	360	350	330
70	120	120	160	180	120
80	230	240	280	820	800
90	220	220	240	190	150
State	14,200	15,200	15,900	17,600	17,450

1988 PRICES AND ECONOMIC DATA

AVERAGE PRICES: SELECTED COMMODITIES, OHIO, 1987 AND 1988

Commodity	Unit	1987	1988	Commodity	Unit	1987	1988
		Dollars				Dollars	
Corn for grain	Bu.	1.95	2.65	Cattle	Cwt.	58.60	63.70
Soybeans	Bu.	5.94	7.70	Cows	Cwt.	42.50	45.70
Wheat	Bu.	2.61	3.70	Steers & heifers	Cwt.	62.50	68.60
Oats	Bu.	1.53	2.80	Calves	Cwt.	73.10	86.10
All hay	Ton	79.50	116.00	Sheep	Cwt.	33.30	30.00
Rye	Bu.	2.50	3.50	Lambs	Cwt.	77.10	65.10
Tobacco - all	Lb.	1.543	1.598	Wool	Lb.	.54	.71
Burley (31)	Lb.	1.546	1.599	Farm chickens	Lb.	.090	.122
Other (42-44)	Lb.	0.960	1.040	Commercial broilers 3/	Lb.	.230	.285
All potatoes	Cwt	5.20	5.65	Turkeys	Lb.	.320	.360
Sugar beets	Ton	32.90	2/	Eggs, all	Doz.	.400	.372
Apples	Lb.	.158	.161	Milk, wholesale, all	Cwt.	12.70	12.00
Peaches	Lb.	.280	.310	Milk eligible for			
Grapes	Ton	216.00	264.00	fluid market	Cwt.	12.80	12.10
Hogs	Cwt	51.00	42.20	Milk, mfg. grade	Cwt.	11.70	11.40
Sows	Cwt	43.40	32.60	Milk cows 4/	Head	925.00	985.00
Barrows & gilts	Cwt	51.50	42.70				

1/Crops are marketing year average price: chickens and hogs, December-November season average price; other items, annual average price. 2/Not available. 3/Live weight equivalent price. 4/For milk herd replacements.

INDEXES OF PRICES RECEIVED BY FARMERS, OHIO,
CONSUMER PRICE INDEX, AND PRODUCER PRICE INDEX, U.S., 1987 AND 1988

Month	All farm products		Lvstk. & lvstk. products 2/		All crops 1/		Consumer (CPI)		Producer (wholesale)	
	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988
	1977=100						1982-84=100		1982=100	
January	107	113	130	129	85	99	111	116	104	106
February	107	116	131	132	86	102	112	116	104	106
March	107	116	130	129	86	103	112	117	104	106
April	111	117	133	129	89	106	113	117	105	107
May	115	122	136	132	94	112	113	118	105	108
June	115	129	137	127	95	130	114	118	106	108
July	112	133	136	123	90	143	114	119	106	109
August	110	131	136	131	86	132	114	119	106	109
September	111	132	137	132	86	133	115	120	106	109
October	110	129	134	133	88	124	115	120	106	109
November	109	128	125	130	94	126	115	120	106	110
December	110	130	125	134	96	127	115	121	106	110

1/Includes indexes for major crops, fruit, potatoes and vegetables. 2/ Includes wool price index.

PRICES PAID FOR FEED AND FEED-PRICE RATIOS, CORN BELT 1/, 1987 AND 1988

Item	Unit	Jan. 1987	Apr. 1987	Jul. 1987	Oct. 1987	Jan. 1988	Apr. 1988	Jul. 1988	Oct. 1988	Jan. 1989
					Dollars					
Hog feed 14-18% protein	cwt.	8.50	8.20	8.60	8.80	9.30	9.45	12.45	11.20	10.85
Hog concentrate 38-12% protein	cwt.	13.30	13.10	14.50	14.45	15.60	15.40	19.45	18.40	17.85
Beef cattle concentrate 32-36% protein	cwt.	12.10	11.60	12.30	12.75	13.80	13.30	16.40	15.50	15.50
Dairy feed 16% protein	ton	157.00	151.00	154.00	160.00	180.00	176.00	213.00	208.00	208.00
Dairy feed 32% protein	ton	255.00	255.00	272.00	273.00	299.00	300.00	373.00	332.00	340.00
Laying feed	ton	176.00	166.00	176.00	180.00	208.00	200.00	259.00	229.00	235.00
Turkey grower	ton	205.00	187.00	206.00	208.00	220.00	201.00	270.00	269.00	269.00
					RATIO					
Egg-feed ratio 2/		7.2	4.8	4.0	4.0	3.3	3.3	2.6	4.5	3.9
Hog-corn ratio 3/		32.3	32.2	35.7	30.4	23.0	21.2	14.6	14.8	15.4
Milk-feed ratio 4/		1.74	1.66	1.57	1.62	1.42	1.35	1.07	1.20	1.29

1/ Corn Belt Region (Ohio, Illinois, Indiana, Iowa, Missouri). 2/ Pounds of feed equal in value to 1 dozen eggs. 3/ Bushels of corn equal in value to 100 pounds of hog, live weight. Ohio prices used for this ratio. 4/ Pounds of 16% dairy feed equal in value to 1 pound of whole milk.

Average Prices Paid by Farmers For Fuels in Corn Belt States 1/

Item	Jan 1987	Apr 1987	July 1987	Oct 1987	Jan 1988	Apr 1988	July 1988	Oct 1988	Jan 1989
				Dollars per gallon					
Gasoline									
Service Station, unleaded	.850	.910	.950	.960	.880	.890	.930	.910	.890
Bulk Delivery, leaded reg	.870	.920	.970	.960	.890	.920	.950	.920	.920
Diesel, bulk delivery	.690	.720	.750	.770	.750	.760	.740	.680	.730
L.P. gas bulk delivery	.590	.580	.510	.540	.560	.550	.530	.520	.530

1/ Illinois, Indiana, Iowa, Missouri, Ohio.

PRICES RECEIVED BY FARMERS: SELECTED COMMODITIES, BY MONTHS, OHIO, 1987 AND 1988 1/

Commodity and year	Unit	Jan.	Feb.	Mar.	Apr.	May	Jun.
				Dollars			
CORN							
1987	Bu.	1.45	1.44	1.46	1.57	1.74	1.79
1988		1.86	1.92	1.95	1.96	2.03	2.72
SOYBEANS							
1987	Bu.	4.84	4.76	4.81	4.98	5.31	5.59
1988		5.93	6.14	6.30	6.65	7.26	8.50
WHEAT							
1987	Bu.	2.69	2.72	2.88	2.79	2.85	2.48
1988		3.08	3.12	2.80	2.98	2.98	3.43
OATS							
1987	Bu.	1.60	1.58	1.55	1.54	1.66	1.63
1988		1.85	1.88	1.87	1.80	1.87	2.46
ALL HAY							
1987	Ton	78.00	78.00	79.00	82.00	84.00	70.00
1988		86.00	87.00	92.00	92.00	92.00	84.00
ALFALFA HAY							
1987	Ton	80.00	80.00	82.00	85.00	90.00	80.00
1988		90.00	90.00	95.00	95.00	95.00	90.00
OTHER HAY							
1987	Ton	65.00	65.00	65.00	65.00	67.00	60.00
1988		70.00	70.00	75.00	75.00	75.00	70.00
ALL POTATOES							
1987	Cwt.	7.45	8.55	7.65	-	-	-
1988		5.60	6.20	6.30	-	-	-
HOGS							
1987	Cwt.	46.70	47.60	46.50	50.50	54.40	59.20
1988		42.70	44.90	41.70	41.60	46.50	46.70
SOWS							
1987	Cwt.	42.40	41.70	40.90	44.10	46.00	44.40
1988		33.10	34.90	34.40	35.00	36.50	32.50
BARROWS & GILTS							
1987	Cwt.	46.90	48.00	46.80	51.00	54.70	60.10
1988		43.20	45.50	42.20	41.90	47.20	47.90
CATTLE, ALL BEEF							
1987	Cwt.	51.70	53.70	56.10	59.50	62.80	60.40
1988		59.40	61.70	63.80	66.10	68.20	60.80
COWS							
1987	Cwt.	38.20	40.20	41.70	42.00	44.20	44.50
1988		45.20	47.80	47.40	48.50	49.20	43.20
STEERS & HEIFERS							
1987	Cwt.	56.00	57.40	59.50	62.40	65.90	64.30
1988		64.00	66.40	69.10	70.60	71.80	67.20
CALVES							
1987	Cwt.	61.50	62.50	65.40	71.00	78.40	82.20
1988		85.00	88.80	90 10	89.30	95.70	85.10
SHEEP							
1987	Cwt.	32.90	36.70	31.60	22.70	33.40	36.90
1988		45.80	35.40	33.60	32.10	31.60	27.40
LAMBS							
1987	Cwt.	75.70	75.40	82.60	93.80	88.20	77.50
1988		79.10	78.90	83.10	76.40	71.90	56.40
WOOL							
1987	Lb.	.420	.420	.450	.450	.530	.460
1988		.560	.610	.630	.680	.700	.760
EGGS							
1987	Doz.	.480	.440	.400	.400	.370	.320
1988		.320	.330	.310	.330	.280	.280
ALL MILK							
1987	Cwt.	13.40	13.20	12.90	12.50	12.10	12.00
1988		12.30	12.00	11.80	11.50	11.40	11.30
MILK, FLUID MARKET							
1987	Cwt.	13.60	13.40	13.00	12.60	12.20	12.10
1988		12.40	12.10	11.80	11.60	11.50	11.40
MILK, MFG. GRADE							
1987	Cwt.	11.80	11.80	11.70	11.50	11.50	10.90
1988		11.70	11.50	11.50	11.00	11.00	10.70
COWS 2/							
1987	Head	850.00			940.00		
1988		1000.00			1040.00		

1/ 1988 data is preliminary. 2/For replacement dairy stock.

PRICES RECEIVED BY FARMERS: SELECTED COMMODITIES, BY MONTHS, OHIO, 1987 AND 1988 (CONT)

Commodity and year	Unit	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
				Dollars			
CORN							
1987	Bu.	1.64	1.55	1.56	1.60	1.74	1.73
1988		3.00	2.86	2.82	2.62	2.54	2.58
SOYBEANS							
1987	Bu.	5.43	5.15	5.09	5.14	5.52	5.76
1988		8.81	8.38	8.21	7.46	7.44	7.40
WHEAT							
1987	Bu.	2.39	2.43	2.58	2.60	2.76	2.92
1988		3.52	3.64	3.83	3.92	3.99	4.07
OATS							
1987	Bu.	1.09	1.55	1.54	1.81	1.71	1.90
1988		2.70	2.72	2.91	2.45	2.69	2.73
ALL HAY							
1987	Ton	60.00	65.00	72.00	80.00	86.00	86.00
1988		149.00	111.00	93.00	93.00	125.00	125.00
ALFALFA HAY							
1987	Ton	70.00	75.00	80.00	85.00	90.00	90.00
1988		175.00	120.00	100.00	100.00	130.00	130.00
OTHER HAY							
1987	Ton	50.00	55.00	60.00	65.00	70.00	70.00
1988		110.00	90.00	75.00	70.00	80.00	80.00
ALL POTATOES							
1987	Cwt.	7.95	4.85	4.05	4.45	5.60	5.45
1988		-	5.35	5.00	5.65	7.20	8.75
HOGS							
1987	Cwt.	58.80	57.90	53.70	48.60	40.10	39.80
1988		43.80	44.80	40.60	38.90	36.30	40.10
SOWS							
1987	Cwt.	44.50	47.60	48.20	44.30	34.90	32.40
1988		29.70	33.90	31.70	30.20	26.20	27.60
BARROWS & GILTS							
1987	Cwt.	59.80	58.70	54.10	48.80	40.40	40.20
1988		44.60	45.60	41.00	39.40	36.90	40.70
CATTLE, ALL BEEF							
1987	Cwt.	58.10	60.10	62.30	60.90	57.30	57.30
1988		58.20	64.10	67.30	66.50	62.80	63.00
COWS							
1987	Cwt.	42.80	42.80	43.80	43.50	42.70	44.20
1988		43.50	45.60	45.60	44.50	43.30	44.90
STEERS & HEIFERS							
1987	Cwt.	62.30	63.90	65.90	65.60	62.20	62.10
1988		63.40	67.30	71.20	70.90	68.70	68.80
CALVES							
1987	Cwt.	75.40	76.40	78.40	75.90	77.70	69.50
1988		81.50	87.80	87.60	82.80	80.40	83.30
SHEEP							
1987	Cwt.	33.00	39.70	31.80	36.50	41.60	55.70
1988		28.20	23.00	23.70	23.40	23.20	27.50
LAMBS							
1987	Cwt.	71.90	67.40	71.60	72.00	70.50	70.80
1988		52.00	53.20	66.60	58.40	61.60	67.60
WOOL							
1987	Lb.	.500	.500	.460	.460	.430	.450
1988		.820	.710	.720	.740	.680	.780
EGGS							
1987	Doz.	.350	.340	.390	.360	.350	.340
1988		.340	.430	.440	.520	.480	.430
ALL MILK							
1987	Cwt.	12.10	12.20	12.60	13.00	13.00	12.90
1988		11.40	11.70	12.10	12.60	13.00	13.10
MILK, FLUID MARKET							
1987	Cwt.	12.20	12.30	12.70	13.10	13.10	13.00
1988		11.50	11.80	12.10	12.60	13.00	13.20
MILK, MFG. GRADE							
1987	Cwt.	11.00	10.90	11.90	12.20	12.10	12.00
1988		10.40	10.70	11.60	12.00	12.40	12.40
MILK COWS							
1987	Head	950.00			950.00		
1988		900.00			1000.00		

FARM INCOME STATEMENT OF OHIO, 1984 TO 1987 AND U.S. 1986, 1987

Gross farm income	Ohio				United States	
	1984	1985	1986	1987	1986	1987
	Million dollars					
Gross farm income 1/	4,853.8	4,530.9	4,139.3	4,192.0	159,832.5	169,765.5
Cash income	3,883.1	4,281.8	3,911.2	3,911.8	152,022.5	160,397.0
Farm marketings	3,606.0	4,076.5	3,589.0	3,421.8	135,102.3	138,094.4
Crops	1,980.4	2,561.8	2,003.5	1,807.7	63,553.9	61,876.1
Livestock and products	1,625.6	1,514.7	1,585.5	1,614.1	71,548.4	76,218.3
Government payments	232.2	149.7	269.0	431.9	11,813.4	16,746.7
Other farm income	44.9	55.6	53.2	58.1	5,106.8	5,555.9
Machine hire/customwork	16.8	23.1	14.9	23.0	538.8	831.4
Other farm-related income 2/	28.1	32.5	38.3	35.1	4,568.0	4,724.5
Noncash income	465.2	348.6	314.3	298.4	10,627.7	9,990.1
Value of home consumption	43.9	30.5	30.2	31.4	888.2	853.9
Rental value of dwellings	421.4	318.0	284.1	267.0	9,739.6	9,136.2
Operator dwellings	418.1	315.1	281.5	264.4	9,605.4	9,002.8
Hired laborer dwellings	3.3	2.9	2.6	2.6	134.1	133.4
Value of inventory adjustment	505.4	-99.4	-86.2	-18.2	-2,817.7	-621.6
Total production expenses 1/	3,983.3	3,662.2	3,325.6	3,235.8	122,336.2	123,501.9
Intermediate product expenses	1,980.3	1,884.3	1,730.9	1,709.7	65,791.9	68,567.7
Farm origin	636.4	602.4	551.3	552.9	28,907.4	31,116.4
Feed purchased	425.0	382.4	351.1	342.1	16,179.1	16,093.5
Livestock and poultry purchased	59.2	72.3	68.5	78.1	9,744.4	12,013.7
Seed purchased	152.1	147.8	131.6	132.7	2,984.0	3,009.3
Manufactured inputs	723.9	676.5	599.5	569.3	17,003.4	16,815.3
Fertilizer and lime	306.4	268.2	265.3	230.7	5,786.9	5,392.3
Pesticides	155.8	163.2	146.5	149.9	4,484.4	4,587.7
Fuel and oil	208.1	191.9	139.6	129.4	4,790.2	4,442.3
Electricity	53.6	53.2	48.0	59.2	1,942.0	2,393.1
Other	620.6	605.4	580.2	587.5	19,881.0	20,636.1
Repair and maintenance	243.9	237.8	243.3	245.2	6,426.1	6,546.0
Other miscellaneous 3/	376.1	367.7	336.9	342.3	13,454.8	14,090.1
Interest	543.3	442.4	399.7	360.9	16,926.2	15,507.6
Real estate	320.2	260.5	240.8	213.2	9,131.2	8,202.4
Nonreal estate	223.0	181.9	158.9	147.6	7,795.0	7,305.2
Contract and hired labor expenses	178.4	180.2	181.3	197.5	9,878.8	10,746.8
Cash labor expenses 4/	167.7	170.6	173.1	187.5	9,461.2	10,241.5
Perquisites	10.7	9.6	8.2	10.0	417.6	505.3
Net rent to nonoperator landlords 5/	304.8	290.1	202.3	204.3	6,697.8	6,986.8
Capitol consumption	852.0	741.5	691.9	636.4	18,916.2	17,347.7
Property taxes	124.5	123.8	119.4	127.0	4,125.4	4,345.2
NET FARM INCOME	870.5	868.7	813.8	956.2	37,496.3	46,263.6
Cash income 6/	3,883.1	4,281.8	3,911.2	3,911.8	152,022.5	160,397.0
Cash expenses 6/	3,043.3	2,839.2	2,558.2	2,520.8	100,629.0	103,336.6
Intermediate product expenses	1,937.0	1,843.7	1,690.7	1,668.5	64,414.2	67,180.2
Interest	518.6	419.7	381.0	342.6	16,215.2	14,889.2
Cash labor expenses 4/	167.7	170.6	173.1	187.5	9,461.2	10,241.5
Net rent to nonoperator landlords 5/	304.8	290.1	202.3	204.3	6,697.8	6,986.8
Property taxes	115.2	115.1	111.1	117.9	3,840.6	4,038.8
NET CASH INCOME	839.8	1,442.6	1,353.1	1,390.9	51,393.5	57,060.4
Cash income	3,883.1	4,281.8	3,911.2	3,911.8	152,022.5	160,397.0
Cash expenses	3,043.3	2,839.2	2,558.2	2 520.8	100,629.0	103,336.3
Capitol consumption	724.4	640.9	601.1	549.4	15,810.1	14,420.2
NET BUSINESS INCOME 7/	115.3	801.7	751.9	841.5	35,583.3	42,640.2
Gross receipts of farms 8/	4,435.7	4,215.9	3,857.9	3,927.6	150,227.1	160,762.7
Nonfactor payments 6/	2,776.7	2,599.7	2,402.9	2,335.8	84,065.0	85,639.2
Intermediate product expenses	1,937.0	1,843.7	1,690.7	1,668.5	64,414.2	67,180.2
Capitol consumption	724.4	640.9	601.1	549.4	15,810.1	14,420.2
Property taxes	115.2	115.1	111.1	117.9	3,840.6	4,038.8
Factor payments 6/	1,659.0	1,616.1	1,455.0	1,591.8	66,162.1	75,123.5
Interest	518.6	419.7	381.0	342.6	16,215.2	14,889.3
Contract and hired labor expenses	178.4	180.2	181.3	197.5	9,878.8	10,746.8
Net rent to nonoperator landlords 5/	304.8	290.1	202.3	204.3	6,697.8	6,986.8
RETURNS TO OPERATORS 9/	657.3	726.2	690.4	847.4	33,370.4	42,500.6
Off-farm income 10/	1,780.9	1,949.0	2,042.2	2,139.6	44,640.1	46,769.4
		NUMBER				
Number of farms	90,000	89,000	88,000	84,000	2,211,920	2,173,410

1/ Includes operator dwellings. 2/ Includes forest product sales, recreational income, and other farm business-related income. Estimates for 1982 and later include income from custom feeding services. 3/ Includes machine hire and customwork expenses; marketing, storage, and transportation expenses; and miscellaneous expenses. Definitions and data sources for 1978 and later are not directly compatible with those of earlier years. 4/ Includes contract labor expenses, hired labor wages, and Social Security payments. 5/ Uses different data sources for periods before 1979, 1979-83, and 1984 later. Estimates are not directly compatible among periods. 6/ Excludes operator dwellings. 7/ Cash income less cash expense and capitol consumption. 8/ Gross farm income less rental value of operator dwellings. 9/ Gross receipts of farms less nonfactor payments, interest, contract and hired labor expenses, and net rent to nonoperator landlords. 10/ Includes off-farm income for members of farm operator dwellings only. *Items may not calculate because of rounding.
farmoperator

NONREAL ESTATE FARM DEBT OUTSTANDING (including operator households), OHIO DECEMBER 1, 1983-87 1/

YEAR	DEBT OWED TO REPORTING INSTITUTIONS (excluding CCC)				DEBT OWED TO INDIVIDUALS AND OTHERS	TOTAL EXCLUDING CCC LOANS	PRICE SUPPORT & STORAGE LOAN	TOTAL INCLUDING CCC LOANS
	ALL OPERATING BANKS	PRODUCTION CREDIT ASSOC.	FEDERAL INTERMEDIATE CREDIT BANKS	FARMERS HOME ADMINISTRATION			MADE OR GUARANTEED BY CCC	
	MILLION DOLLARS							
1983	591	628	13	235	508	1,974	110	2,084
1984	624	475	16	286	475	1,876	108	1,984
1985	554	299	10	328	401	1,592	468	2,060
1986	515	275	0	318	326	1,434	482	1,916
1987	499	236	0	299	278	1,312	325	1,637

REAL ESTATE DEBT OUTSTANDING (including operator household), OHIO DECEMBER 1, 1983-87

YEAR	FEDERAL LAND BANKS	FARMERS HOME ADMINISTRATION	LIFE INSURANCE COMPANIES	ALL OPERATING BANKS	INDIVIDUALS AND OTHERS	CCC STORAGE AND DRYING LOANS	TOTAL
	MILLION DOLLARS						
1983	1,376	170	294	459	823	26	3,148
1984	1,345	196	277	464	762	18	3,062
1985	1,119	213	239	500	693	9	2,773
1986	894	220	198	559	611	4	2,487
1987	730	218	165	593	525	1	2,232

Source: Economic Indicators of the Farm Sector, State Financial Summary, 1987 1/ Numbers may not add because of rounding.

FARM ASSETS, DEBTS AND RATIOS OHIO 1984 TO 1987, U.S. 1986, 1987

	OHIO				UNITED STATES	
	12/31/84	12/31/85	12/31/86	12/31/87	12/31/86	12/31/87
	MILLION DOLLARS					
Farm assets:						
Real Estate	17,790.8	16,005.4	14,883.6	15,459.6	554,032.1	567,202.7
Livestock & Poultry	1,007.6	985.2	1,047.9	1,225.4	47,633.1	57,579.2
Machinery & Motor Vehicles	3,772.1	3,439.3	3,191.0	2,890.8	84,386.0	78,583.0
Crops	1,133.3	920.5	651.5	723.7	19,140.7	20,533.0
Household equipment & furnishings	755.0	813.4	889.6	988.9	30,452.0	33,277.0
Financial assets	1,662.7	1,710.7	1,912.0	1,980.0	53,762.8	55,895.7
Total Farm assets	26,121.4	23,874.5	22,575.7	23,268.4	789,406.8	813,070.6
Farm debt:						
Real Estate debt	3,062.5	2,773.3	2,486.6	2,232.1	95,781.9	87,411.7
Non-real estate debt	1,876.4	1,592.3	1,433.9	1,311.8	71,033.1	65,879.7
CCC loans	126.6	476.6	485.2	325.9	18,805.0	14,695.3
Total Farm debt 1/	4,938.9	4,365.6	3,920.5	3,543.9	166,814.9	153,291.4
Equity	21,182.5	19,508.9	18,655.2	19,724.5	622,591.8	659,779.2
Debt/assets ratio	18.9	18.3	17.4	15.2	21.1	18.9
Debt/equity ratio	23.3	22.4	21.0	18.0	26.8	23.2
Net farm income/debt ratio 2/ 3/	17.6	19.9	20.8	27.0	22.4	30.2

1/ Excludes CCC loans. 2/ Net farm income after inventory adjustment. 3/ Calculated using end of year debt.

VALUE OF EXPORT SHARES 1/ OF AGRICULTURAL COMMODITIES, OHIO AND U.S., FISCAL YEARS 1985-88

Year ended Sept 30	Wheat and products	Feed Grains and products 2/	Soybeans and products 3/	Tobacco unmfd	Fruits and preps	Vegetables and preps	Feeds and fodder	Seeds
			MILLION DOLLARS					
			OHIO					
1985	78.0	433.3	389.5	12.4	3.7	20.2	17.3	7.0
1986	102.8	266.3	426.9	8.7	3.5	24.0	19.5	7.3
1987	69.7	247.6	434.7	9.5	2.5	26.7	23.0	7.4
1988	73.9	296.8	534.7	9.6	5.0	27.9	30.7	6.3
			UNITED STATES					
1985	4,525.9	7,600.6	5,267.1	1,587.9	1,200.1	945.8	472.8	352.3
1986	3,546.8	4,707.2	5,578.5	1,317.5	1,237.0	998.2	557.0	366.4
1987	3,115.6	4,662.3	5,752.9	1,203.1	1,466.2	1,175.8	671.9	371.1
1988	4,673.8	6,228.5	6,915.5	1,296.0	1,714.4	1,282.4	872.9	414.5

VALUE OF EXPORT SHARES 1/ OF AGRICULTURAL COMMODITIES, OHIO AND U.S., FISCAL YEARS 1985-88 (continued)

Year	Live animals and meat ex poultry	Hides and skins 4/	Poultry and products	Fats oils and greases	Dairy products	Other 5/	Total
		MILLION DOLLARS					
		OHIO					
1985	19.9	19.7	8.9	10.2	11.3	22.5	1,054.0
1986	22.3	21.4	10.7	7.8	12.0	24.2	957.4
1987	24.2	21.5	12.5	6.0	13.4	26.1	924.9
1988	34.0	24.4	14.4	7.7	12.8	31.5	1,111.7
			UNITED STATES				
1985	1,160.9	1,324.6	392.8	607.9	413.5	5,348.6	31,200.8
1986	1,356.7	1,440.4	455.3	476.5	431.0	3,838.4	26,306.9
1987	1,630.2	1,665.6	594.3	416.8	490.6	4,659.7	27,876.0
1988	2,248.6	1,837.5	647.4	544.6	535.5	6,122.6	35,334.3

1/The export shares for Ohio were derived from the State's contribution to national output. They do not show actual State exports, but instead reflect the prorated stake in the national export total. 2/Includes corn, barley, oats, grain sorghum and other coarse grain products. 3/Soybeans, soybean meal, and soybean oil. 4/Distribution of furskins to the State prorated level includes mink pelts. 5/Other includes rice, sunflower seed and oil, peanuts and products, cotton and linters, cotton-seed and products and tree nuts which were listed separately for U.S. but which are not estimated for Ohio. Also includes other products estimated for Ohio and the U.S. but not listed above.

VALUE OF U.S. FOREIGN TRADE AND TRADE BALANCE, (AGRICULTURAL AND TOTAL) - OCTOBER-SEPTEMBER 1985-88

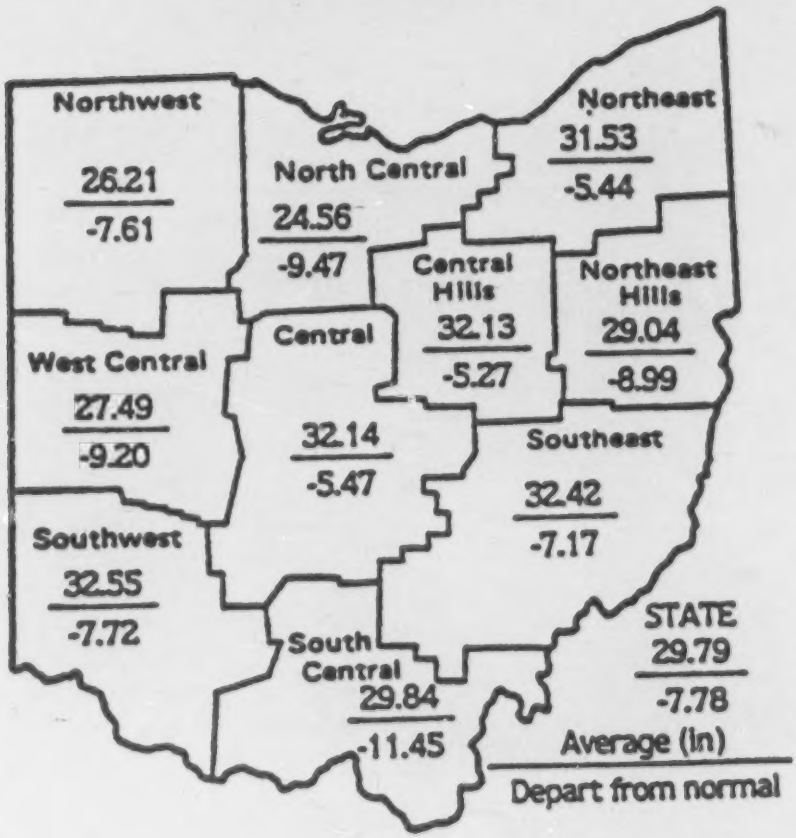
	Agriculture Trade					Total Trade		
Year	Agriculture Exports	Agriculture share of Total	Agriculture Imports	Agriculture share of total	Agriculture Trade balance	Total Exports 1/	Total Imports 2/	Total Trade balance
	Mil. Dollars	Percent	Mil. Dollars	Percent		Million Dollars		
1985	31,201	15	19,740	6	11,461	210,437	333,462	-123,025
1986	26,307	13	20,875	6	5,432	202,938	363,730	-160,792
1987	27,876	12	20,650	5	7,226	230,787	388,024	-157,237
1988	35,334	12	21,011	5	14,323	294,347	430,152	-135,805

1/ Domestic exports. 2/ Imports for consumption, customs value basis.
Source: Foreign Agricultural Trade of the United States November/December 1988. Fiscal Year 1988.

WEATHER STATIONS

Location	Abbreviations
NORTHWEST	
Hoytville	HYTVL
Findlay	FNY
Fremont	FREMT
Pandora	PAN
Toledo	TOL
Willard	WLLRD
NORTHEAST	
Akron-Canton	CAK
Canfield-Mahoning	CNFLD
Cleveland	CLE
Wooster	WOSTR
Youngstown	YNG
Grape Branch	
CENTRAL	
Celina	CLINA
Columbus	CMH
Columbus (OSU)	OSU
Coshocton	CHSTN
Mansfield	MFD
Marion	MAR
Delaware	DEL
Circleville	CRCVL
SOUTHWEST	
Cincinnati	CVG
Dayton	DAY
Ripley	RIPLY
South Charleston	SCHSN
Wilmington	WLMGT
Oxford	OXF
SOUTHEAST	
Caldwell	CLDWL
Jackson	JCKSN
Zanesville	ZZV
Huntington, WV	HTS
Parkersburg, WV	PKB

PRECIPITATION
1988 WATER YEAR



OHIO MONTHLY PRECIPITATION FOR DRIEST YEARS ON RECORD

Rank	1		2		3		4		5		10				
Period	1963 Amt of Precip	% of norm	1934 Amt of Precip	% of norm	1930 Amt of Precip	% of norm	1895 Amt of Precip	% of norm	1953 Amt of Precip	% of norm	1987 Amt of Precip	% of norm	1988 Amt of Precip	% of norm	Normal Amt of Precip 1/
JANUARY	1.36	49.28	1.57	56.88	4.62	167.39	4.00	144.93	3.79	137.32	1.59	57.61	1.40	50.72	2.76
FEBRUARY	0.90	40.18	1.07	47.77	2.68	119.64	0.69	30.80	1.22	54.46	0.50	22.32	3.14	140.18	2.24
MARCH	6.19	183.14	2.84	84.02	2.76	81.66	1.59	47.04	2.64	78.11	2.54	75.15	2.38	70.41	3.38
APRIL	2.80	79.77	2.11	60.11	2.02	57.55	2.11	60.11	2.88	82.05	2.92	83.19	2.33	66.38	3.51
MAY	2.48	66.13	0.81	21.60	1.76	46.93	1.80	48.00	4.36	116.27	3.34	89.07	1.78	47.47	3.75
JUNE	2.45	61.87	3.59	90.66	2.26	57.07	2.47	62.37	2.83	71.46	4.61	116.41	0.85	21.46	3.96
JULY	3.55	90.56	2.73	69.64	1.54	39.29	2.00	51.02	3.53	90.05	4.16	106.12	4.47	114.03	3.92
AUGUST	2.77	79.60	4.27	122.70	2.40	68.97	2.96	85.06	2.10	60.34	3.84	110.34	3.55	102.01	3.48
SEPTEMBER	0.89	29.67	3.77	125.67	2.68	89.33	1.66	55.33	1.49	49.67	1.90	63.33	3.16	105.33	3.00
OCTOBER	0.25	10.68	0.53	22.65	1.26	53.85	1.22	52.14	0.73	31.20	1.79	76.50	2.51	107.26	2.34
NOVEMBER	1.76	66.42	1.88	70.94	1.54	58.11	4.11	155.09	1.23	46.42	1.77	66.79	4.27	161.13	2.65
DECEMBER	1.10	42.64	1.44	55.81	1.22	47.29	3.85	149.22	1.90	73.64	2.89	112.02	2.30	89.15	2.58
CALENDAR YEAR	26.50	70.54	26.61	70.83	26.74	71.17	28.46	75.75	28.70	76.39	31.85	84.78	32.14	85.55	37.57
JAN-JUNE	16.18	82.55	11.99	61.17	16.10	82.14	12.66	64.59	17.72	90.41	15.50	79.08	11.88	60.61	19.60
APR-JUNE	7.73	68.89	6.51	58.02	6.04	53.83	6.38	56.86	10.07	89.75	10.87	96.88	4.96	44.21	11.22

1/ Normal is based on 1931-1980 average.

MONTHLY PRECIPITATION AND DEVIATIONS FOR 1980 1/

MONTH	MONTH	DEV	ACCUM	ACCUM DEV	MONTH	DEV	ACCUM	ACCUM DEV	MONTH	DEV	ACCUM	ACCUM DEV
	HOYTVILLE				FINDLAY				FREMONT			
APR	1.89	-1.05	1.89	-1.05	2.28	-.66	2.28	-.66	1.63	-1.31	1.63	-1.31
MAY	.48	-2.56	2.37	-3.61	.65	-2.39	2.93	-3.05	.91	-2.13	2.54	-3.44
JUN	.37	-2.37	2.74	-6.18	.36	-2.58	3.29	-5.63	.63	-2.31	3.17	-5.75
JUL	2.25	-.79	4.99	-6.97	3.26	.22	6.55	-5.41	2.82	-.22	5.99	-5.97
AUG	1.88	-.87	6.87	-7.84	4.02	.98	10.57	-4.43	4.89	1.85	10.88	-4.12
SEP	.93	-1.03	7.80	-8.87	.93	-1.03	11.50	-5.46	1.81	-.22	12.69	-4.34
OCT	2.17	.14	9.97	-8.72	1.91	.37	13.41	-5.09	3.00	1.50	15.69	-2.84
NOV	3.78	1.82	13.75	-6.90	3.72	1.76	17.13	-3.33	4.13	2.17	19.82	-.67
	TOLEDO				WILLARD				AKRON CANTON			
APR	1.55	-1.03	1.55	-1.03	2.26	-.68	2.26	-.68	2.85	-.09	2.85	-.09
MAY	1.37	-.98	2.92	-2.01	1.11	-1.93	3.37	-2.61	1.88	-1.16	4.73	-1.25
JUN	.27	-2.67	3.19	-4.69	.53	-2.41	3.90	-5.02	.37	-2.57	5.10	-3.82
JUL	3.87	.83	7.06	-3.86	4.54	1.50	8.44	-3.52	5.01	1.76	10.11	-2.08
AUG	5.12	2.21	12.18	-1.64	3.56	.52	12.00	-3.00	3.89	.85	14.00	-1.23
SEP	1.78	-.18	13.96	-1.82	1.56	-1.05	13.56	-4.05	4.89	2.57	18.89	1.34
OCT	4.30	2.83	18.26	1.01	1.35	-.68	14.91	-4.73	2.67	.64	21.56	1.98
NOV	4.36	2.40	22.62	3.40	3.33	1.37	18.24	-3.36	3.88	1.92	25.44	3.90
	CANFIELD				CLEVELAND				WOOSTER			
APR	2.04	-.90	2.04	-.90	3.02	.08	3.02	.08	2.21	-.73	2.21	-.73
MAY	1.13	-1.91	3.17	-2.81	1.33	-1.71	4.35	-1.63	1.25	-1.79	3.46	-2.52
JUN	.78	-2.26	3.95	-5.07	.65	-2.29	5.00	-3.92	.52	-2.42	3.98	-4.94
JUL	5.55	1.69	9.50	-3.38	3.42	.38	8.42	-3.54	6.37	2.51	10.35	-2.43
AUG	3.34	.30	12.84	-3.08	3.41	.37	11.83	-3.17	3.40	.36	13.75	-2.07
SEP	2.33	-.28	15.17	-3.36	1.77	-.52	13.60	-3.69	2.93	.35	16.68	-1.72
OCT	2.01	-.02	17.18	-3.38	2.76	.73	16.36	-2.95	1.45	-.58	18.13	-2.29
NOV	3.35	1.39	20.53	-1.99	4.57	2.61	20.93	-.34	3.68	1.72	21.81	-.58
	YOUNGSTOWN				CELINA				COLUMBUS			
APR	2.37	-.57	2.37	-.57	1.89	-1.05	1.89	-1.05	2.26	-.68	2.26	-.68
MAY	3.84	.80	6.21	.23	.93	-2.11	2.82	-3.16	2.27	-.77	4.53	-1.45
JUN	.69	-2.25	6.90	-2.02	.97	-1.97	3.79	-5.13	1.34	-2.25	5.87	-3.71
JUL	5.33	1.83	12.23	-.19	3.97	.93	7.76	-4.20	7.80	4.17	13.67	.47
AUG	3.85	.81	16.08	.62	3.12	1.06	10.88	-3.14	2.62	-.42	16.29	.05
SEP	3.52	.91	19.60	1.53	3.10	1.11	13.98	-2.03	3.51	1.32	19.80	1.37
OCT	3.11	1.08	22.71	2.61	1.61	-.42	15.59	-2.45	1.71	.21	21.51	1.58
NOV	3.03	1.07	25.74	3.68	3.83	1.87	19.42	-.58	3.58	1.62	25.09	3.19
	OSU COLUMBUS				COSHOCTON				MANSFIELD			
APR	2.21	-.73	2.21	-.73	1.78	-1.16	1.78	-1.16	3.94	1.00	3.94	1.00
MAY	2.13	-.91	4.34	-1.64	1.98	-1.06	3.76	-2.22	2.84	-.20	6.78	.80
JUN	1.30	-2.29	5.64	-3.94	.81	-2.52	4.57	-4.74	.55	-2.39	7.33	-1.59
JUL	7.53	3.90	13.17	-.03	6.09	2.04	10.66	-2.71	4.90	1.86	12.23	.27
AUG	2.44	-.60	15.61	-.63	2.74	-.46	13.40	-3.17	5.26	2.22	17.49	2.49
SEP	3.54	1.35	19.15	.72	3.42	1.03	16.82	-2.13	2.60	.15	20.09	2.64
OCT	1.68	.18	20.83	.90	1.36	-.67	18.18	-2.80	2.27	.60	22.36	3.24
NOV	3.57	1.61	24.40	2.50	4.57	2.61	22.75	-.19	5.30	3.34	27.66	6.58
	MARION				DELAWARE				CIRCLEVILLE			
APR	2.11	-.83	2.11	-.83	1.83	-1.11	1.83	-1.11	3.70	.76	3.70	.76
MAY	1.25	-1.79	3.36	-2.62	.99	-2.05	2.82	-3.16	1.87	-1.43	5.57	-.67
JUN	.52	-2.42	3.88	-5.04	1.12	-1.82	3.94	-4.98	.93	-2.01	6.50	-2.68
JUL	4.68	1.64	8.56	-3.40	6.13	2.76	10.07	-2.22	4.75	.86	11.25	-1.82
AUG	3.36	.32	11.92	-3.08	2.50	-.54	12.57	-2.76	3.54	.44	14.79	-1.39
SEP	2.45	.03	14.37	-3.05	4.13	1.94	16.70	-.82	5.66	3.01	20.45	1.63
OCT	1.87	-.16	16.24	-3.20	1.36	-.67	18.06	-1.48	3.11	1.08	23.56	2.71
NOV	4.00	2.04	20.24	-1.17	4.33	2.37	22.39	.89	5.00	3.04	28.56	5.75
	CINCINNATI				DAYTON				RIPLEY			
APR	4.07	1.13	4.07	1.13	2.10	-.84	2.10	-.84	5.82	2.78	5.82	2.78
MAY	1.99	-1.05	6.06	.08	1.62	-1.42	3.72	-2.26	2.10	-.94	7.92	1.84
JUN	1.19	-2.60	7.25	-2.52	1.40	-1.54	5.12	-3.80	.42	-2.52	8.34	-.68
JUL	6.52	2.73	13.77	.21	3.76	.72	8.88	-3.08	5.04	1.02	13.38	.34
AUG	2.44	-.04	16.21	.16	2.86	.18	11.74	-2.90	2.22	-1.44	15.60	-1.10
SEP	3.05	1.09	19.26	1.25	4.62	2.66	16.36	-.24	2.47	-.28	18.07	-1.37
OCT	1.86	-.17	21.12	1.09	3.04	1.28	19.40	1.03	2.29	.26	20.36	-1.11
NOV	4.78	2.03	25.90	3.12	6.19	4.23	25.59	5.26	5.09	2.48	25.45	1.37
	S. CHARLESTON				WILMINGTON				OXFORD			
APR	2.67	-.27	2.67	-.27	2.91	-1.01	2.91	-1.01	2.42	-.52	2.42	-.52
MAY	1.19	-2.34	3.86	-2.61	1.12	-2.93	4.03	-3.94	1.47	-1.57	3.89	-2.09
JUN	.81	-2.20	4.67	-4.81	.40	-3.52	4.43	-7.47	1.00	-2.14	4.89	-4.23
JUL	3.55	-.34	8.22	-5.15	6.42	2.73	10.85	-4.74	3.11	-.75	8.00	-4.97
AUG	2.15	-.39	10.37	-5.54	2.24	-.80	13.09	-5.54	1.99	-1.05	9.99	-6.02
SEP	4.78	2.41	15.63	-3.13	4.95	2.24	18.04	-3.30	3.04	.43	13.03	-5.60
OCT	2.17	.14	17.80	-2.98	1.62	-.41	19.66	-3.71	3.30	1.27	16.33	-4.32
NOV	4.32	2.36	22.12	-.63	4.14	1.26	23.80	-2.44	2.82	.86	19.15	-3.46
	CALDWELL				JACKSON				ZANESVILLE			
APR	2.76	-.18	2.76	-.18	2.88	-.32	2.88	-.32	1.86	-1.08	1.86	-1.08
MAY	2.33	-.81	5.09	-.99	1.61	-1.43	4.49	-1.75	2.34	-.70	4.20	-1.78
JUN	1.00	-2.92	6.09	-3.91	.74	-2.33	5.23	-4.08	.91	-2.85	5.11	-4.63
JUL	2.48	-1.57	8.57	-5.48	1.96	-2.09	7.19	-6.18	3.22	-.83	8.33	-5.46
AUG	2.54	-.73	11.11	-6.21	2.98	-.45	10.17	-6.63	4.35	1.08	12.68	-4.38
SEP	2.75	.33	13.86	-5.88	3.28	.47	13.45	-6.16	2.30	.11	14.98	-4.27
OCT	1.87	-.16	15.73	-6.03	3.00	.97	16.45	-5.18	1.53	-.50	16.51	-4.76
NOV	3.89	1.93	19.62	-4.11	4.13	2.17	20.58	-3.01	3.84	1.88	20.35	-2.89
	HUNTINGTON				PARKERSBURG							
APR	3.24	.30	3.24	.30	2.14	-.80	2.14	-.80				
MAY	2.01	-1.98	5.25	-1.68	1.39	-1.65	3.53	-2.45				
JUN	.55	-3.37	5.80	-5.05	.75	-2.19	4.28	-4.64				
JUL	6.88	2.83	12.68	-2.22	5.34	1.78	9.62	-2.86				
AUG	2.69	-.81	15.37	-3.03	3.67	.50	13.29	-2.36				
SEP	2.62	.01	17.99	-3.02	3.52	1.20	16.81	-1.16				
OCT	1.91	-.12	19.90	-3.14	1.94	-.09	18.75	-1.25				
NOV	5.52	3.53	25.42	.39	4.39	2.43	23.14	1.18				

1/ DEVIATIONS FROM NORMAL RAINFALL ARE DERIVED USING THE AVERAGE RAINFALL OVER A 30-YEAR PERIOD. THESE NORMALS ARE UPDATED EACH DECADE, AND WEATHER STATIONS WITHOUT DEVIATIONS HAD LESS THAN 30 YEARS OF DATA DURING THE PERIOD 1951-80.

MONTHLY GROWING DEGREE DAYS, (BASE 50) SEASON ACCUMULATION, DEVIATIONS FROM NORMAL, 1/1988

MONTH	MONTH	DEV	ACCUM	ACCUM DEV	MONTH	DEV	ACCUM	ACCUM DEV	MONTH	DEV	ACCUM	ACCUM DEV
	HOYTVILLE				FINDLAY				FREMONT			
APR	146	-33	146	-33	156	12	156	12	133	13	133	13
MAY	417	119	563	16	441	104	597	116	399	74	532	87
JUN	561	-45	1124	-29	613	33	1210	149	570	-21	1102	66
JUL	708	-21	1832	-50	787	79	1997	228	734	-2	1836	64
AUG	718	54	2550	4	743	98	2740	326	707	26	2543	90
SEP	451	3	3001	7	481	64	3221	390	417	-33	2960	57
OCT	150	-81	3151	-74	154	-41	3375	349	144	-51	3104	6
NOV	59	35	3210	-39	67	55	3442	404	50	33	3154	39
	TOLEDO				WILLARD				AKRON CANTON			
APR	162	19	162	19	135	-28	135	-28	155	10	155	10
MAY	407	80	569	99	379	44	514	16	385	65	540	75
JUN	570	30	1139	129	541	-2	1055	14	554	20	1094	95
JUL	735	61	1874	190	718	60	1773	74	761	91	1855	186
AUG	713	105	2587	295	698	89	2471	163	716	94	2571	280
SEP	448	58	3035	353	441	36	2912	199	434	37	3005	317
OCT	144	-51	3179	302	137	-72	3049	127	131	-57	3136	260
NOV	63	52	3242	354	66	46	3115	173	77	63	3213	323
	CANFIELD				CLEVELAND				WOOSTER			
APR	155	-16	155	-16	138	13	138	13	186	44	186	44
MAY	343	5	498	-11	368	66	506	79	367	57	553	101
JUN	503	-5	1001	-16	559	31	1065	110	523	18	1076	119
JUL	658	33	1659	17	756	89	1821	199	710	78	1786	197
AUG	647	59	2306	76	733	113	2554	312	689	106	2475	303
SEP	394	-3	2700	73	469	63	3023	375	422	46	2897	349
OCT	137	-76	2837	-3	150	-39	3173	336	142	-46	3039	303
NOV	77	55	2914	52	84	68	3257	404	83	70	3122	373
	YOUNGSTOWN				CELINA				COLUMBUS			
APR	162	37	162	37	209	17	209	17	203	12	203	12
MAY	377	83	539	120	502	121	711	138	435	57	638	69
JUN	533	43	1072	163	649	45	1360	183	597	-9	1235	60
JUL	699	84	1771	+247	777	52	2137	235	791	56	2026	116
AUG	682	105	2453	352	757	91	2894	326	769	88	2795	204
SEP	414	51	2867	403	507	62	3401	388	494	41	3289	245
OCT	123	-46	2990	357	164	-71	3565	317	168	-57	3457	188
NOV	73	65	3063	422	64	38	3629	355	99	73	3556	261
	OSU COLUMBUS				COSHOCTON				MANSFIELD			
APR	190	-1	190	-1	145	-63	145	-63	147	8	147	8
MAY	417	39	607	38	404	25	549	-38	389	74	536	82
JUN	577	-29	1184	9	591	20	1140	-18	573	33	1109	115
JUL	780	45	1964	54	787	105	1927	87	759	84	1868	199
AUG	749	68	2713	122	747	104	2674	191	721	93	2589	292
SEP	483	30	3196	152	448	15	3122	206	435	29	3024	321
OCT	167	-58	3363	94	132	-108	3254	98	128	-63	3152	258
NOV	98	72	3461	166	74	36	3328	134	72	60	3224	318
	MARION				DELAWARE				CIRCLEVILLE			
APR	154	4	154	4	182	-2	182	-2	240	-3	240	-3
MAY	403	76	557	80	414	58	596	56	446	14	686	11
JUN	555	9	1112	89	556	-12	1152	44	593	-53	1279	-42
JUL	757	82	1869	171	735	39	1887	83	749	-18	2028	-60
AUG	710	102	2579	273	714	77	2601	160	760	43	2788	-17
SEP	440	39	3019	312	441	19	3042	179	473	-29	3261	-46
OCT	155	-50	3174	262	149	-76	3191	103	167	-112	3428	-158
NOV	84	66	3258	328	85	57	3276	160	113	56	3541	-102
	CINCINNATI				DAYTON				RIPLEY			
APR	245	21	245	21	211	6	211	6	208	-47	208	-47
MAY	474	57	719	78	460	16	671	22	433	8	641	-39
JUN	653	9	1372	87	631	-59	1302	-37	598	-26	1239	-65
JUL	808	29	2180	116	803	-3	2105	-40	772	30	2011	-35
AUG	799	66	2979	182	788	24	2893	-16	809	103	2820	68
SEP	549	47	3528	229	496	-29	3389	-45	542	52	3362	120
OCT	193	-58	3721	171	151	-98	3540	-143	200	-76	3562	44
NOV	127	85	3848	256	89	53	3629	-90	123	56	3685	100
	S CHARLESTON				WILMINGTON				[illegible]ORD			
APR	183	-16	183	-16	179	-25	179	-25	217	-40	217	-40
MAY	429	51	612	35	406	22	585	-3	438	-4	655	-44
JUN	587	-3	1199	32	576	-20	1161	-23	595	-66	1250	-110
JUL	747	39	1946	71	735	24	1896	1	758	-12	2008	-122
AUG	720	65	2666	136	708	45	2604	46	745	23	2753	-99
SEP	453	8	3119	144	434	-14	3038	32	484	-27	3237	-126
OCT	153	-82	3272	62	145	-96	3183	-64	172	-115	3409	-241
NOV	78	48	3350	110	90	56	3273	-8	103	40	3512	-201
	CALDWELL				JACKSON				ZANESVILLE			
APR	193	-37	193	-37	247	9	247	9	195	1	195	1
MAY	394	7	587	-30	436	38	683	47	401	35	596	36
JUN	569	1	1156	-29	557	-16	1240	31	569	3	1165	39
JUL	749	68	1905	39	741	37	1981	68	758	63	1923	102
AUG	753	103	2658	142	763	108	2744	176	739	93	2662	195
SEP	463	16	3121	158	500	53	3244	229	471	41	3133	236
OCT	164	-89	3285	69	205	-59	3449	170	153	-72	3286	164
NOV	110	66	3395	135	140	78	3589	248	111	79	3397	243
	HUNTINGTON				PARKERSBURG							
APR	271	-31	271	-31	239	-18	239	-18				
MAY	458	-29	729	-60	422	11	661	-7				
JUN	630	-57	1359	-117	599	31	1260	24				
JUL	792	10	2151	-107	781	84	2041	108				
AUG	792	33	2943	-74	772	117	2813	225				
SEP	536	-17	3479	-91	504	54	3317	279				
OCT	217	-89	3696	-180	183	-90	3500	189				
NOV	169	73	3865	-107	141	80	3641	269				

1/ DEVIATIONS FROM NORMAL GROWING DEGREE DAYS (GDD) ARE DERIVED USING GDD OVER A 30-YEAR PERIOD. THESE NORMALS ARE UPDATED EACH DECADE, AND STATIONS WITHOUT DEVIATIONS HAD LESS THAN 30 YEARS OD DATA DURING THE PERIOD 1951-80.

AVERAGE WEEKLY SOIL TEMPERATURES 1988

WEEK ENDING	HOYTVILLE G	HOYTVILLE B	FREMONT G	FREMONT B	WILLARD G	WILLARD B	GRAPE BRANCH G	GRAPE BRANCH B	CANFIELD G	CANFIELD B
APR 4	..	45	44	46	40	44	..	49	..	49
APR 11	..	47	48	51	43	46	..	52	..	49
APR 18	..	48	46	47	44	43	..	50	..	45
APR 25	..	45	45	47	48	45	..	48	..	46
MAY 2	..	48	47	50	46	46	..	50	..	48
MAY 9	..	54	53	57	52	53	..	58	..	54
MAY 16	..	58	57	61	55	56	..	61	..	59
MAY 23	..	61	59	62	57	57	..	62	..	61
MAY 30	..	65	63	67	58	58	..	67	..	62
JUN 6	..	66	66	71	64	63	..	74	..	67
JUN 13	..	67	68	71	64	64	..	77	..	69
JUN 20	..	71	72	76	64	63	..	84	..	73
JUN 27	..	76	76	79	67	66	..	85	..	77
JUL 4	..	71	72	74	66	66	..	81	..	70
JUL 11	..	81	78	82	66	67	..	91	..	80
JUL 18	..	83	78	81	66	67	..	89	..	80
JUL 25	..	73	76	77	68	66	..	77	..	73
AUG 1	..	75	76	77	71	71	..	79	..	75
AUG 8	..	81	80	85	71	71	..	82	..	78
AUG 15	..	81	80	84	76	74	..	84	..	82
AUG 22	..	75	77	77	74	72	..	80	..	76
AUG 29	..	67	69	70	69	66	..	71	..	68
SEP 5	..	66	67	68	63	65	..	68	..	66
SEP 12	..	63	65	64	60	59	..	63	..	62
SEP 19	..	66	66	67	62	60	..	65	..	63
SEP 26	..	62	66	65	61	60	..	63	..	63
OCT 3	..	62	63	65	61	60	..	63	..	64
OCT 10	..	50	56	53	56	54	..	52	..	52
OCT 17	..	48	51	49	51	51	..	47	..	47
OCT 24	..	46	54	52	47	49	..	49	..	49
OCT 31	..	39	51	48	44	47	..	41	..	42
NOV 7	..	41	47	46	41	40	..	44	..	44

WEEK ENDING	WOOSTER G	WOOSTER B	CELINA G	CELINA B	MARION G	MARION B	OSU COLUMBUS G	OSU COLUMBUS B	COSHOCTON G	COSHOCTON B
APR 4	45	46	47	51	48	51	48	52	47	47
APR 11	47	49	52	54	49	51	50	52	50	47
APR 18	44	47	51	55	50	54	50	51	49	47
APR 25	44	48	49	53	48	50	51	51	49	48
MAY 2	46	50	50	58	50	52	51	51	50	49
MAY 9	50	54	55	63	55	61	57	57	55	55
MAY 16	55	60	61	66	61	66	61	63	60	61
MAY 23	57	61	63	71	26	65	63	64	62	62
MAY 30	56	64	67	74	68	72	66	66	62	64
JUN 6	59	66	70	76	71	72	71	71	68	67
JUN 13	63	69	70	77	69	69	70	70	69	69
JUN 20	73	71	74	83	70	73	71	74	74	74
JUN 27	77	75	77	86	75	76	75	77	77	79
JUL 4	72	70	76	81	75	77	72	72	76	74
JUL 11	81	78	83	90	84	86	79	81	80	82
JUL 18	81	79	83	87	83	85	81	81	79	81
JUL 25	72	73	79	80	76	78	79	77	76	75
AUG 1	73	75	80	84	78	82	78	78	79	77
AUG 8	64	78	82	88	82	86	82	83	81	81
AUG 15	65	80	83	89	83	87	82	82	81	82
AUG 22	61	76	80	82	79	80	80	79	79	79
AUG 29	57	68	74	76	71	73	74	70	73	71
SEP 5	62	67	71	74	70	71	68	68	69	66
SEP 12	62	65	69	71	64	68	62	62	68	64
SEP 19	64	66	71	73	68	69	69	69	68	65
SEP 26	64	65	70	70	66	69	69	68	67	64
OCT 3	59	64	69	71	66	68	67	67	66	64
OCT 10	42	55	60	59	55	53	57	54	57	52
OCT 17	39	51	55	57	49	50	50	50	52	46
OCT 24	39	51	54	55	50	51	51	51	52	48
OCT 31	32	45	46	45	44	42	46	44	46	41
NOV 7	44	45	46	46	44	45	46	46	45	41

G=GRASS B=BARE

AVERAGE WEEKLY SOIL TEMPERATURE 1988

WEEK ENDING	DELAWARE G	DELAWARE B	CIRCLEVILLE G	CIRCLEVILLE B	RIPLEY G	RIPLEY B	S. CHARLESTON G	S. CHARLESTON B	WILMINGTON G	WILMINGTON B
APR 4	..	46	48	53	52	55	..	47	49	51
APR 11	..	48	51	53	54	53	..	48	51	50
APR 18	..	49	50	54	54	54	..	50	50	51
APR 25	..	49	50	51	54	53	..	48	50	48
MAY 2	..	50	50	53	55	53	..	51	51	51
MAY 9	..	55	55	59	58	60	..	56	55	58
MAY 16	..	61	65	69	64	68	..	62	62	66
MAY 23	..	64	64	69	65	68	..	65	64	66
MAY 30	..	67	66	70	67	67	..	66	67	67
JUN 6	..	70	68	71	71	75	..	67	70	73
JUN 13	..	72	69	74	70	74	..	70	72	75
JUN 20	..	76	76	78	74	81	..	74	76	78
JUN 27	..	80	77	83	79	84	..	77	80	83
JUL 4	..	77	76	77	76	80	..	72	76	76
JUL 11	..	83	85	85	82	87	..	80	84	85
JUL 18	..	83	80	80	81	82	..	78	80	82
JUL 25	..	76	77	79	80	80	..	73	79	78
AUG 1	..	77	79	79	81	82	..	74	79	78
AUG 8	..	79	83	83	82	84	..	80	82	83
AUG 15	..	80	81	84	83	86	..	81	81	85
AUG 22	..	79	79	82	83	86	..	80	80	84
AUG 29	..	72	73	78	78	78	..	71	73	74
SEP 5	..	69	70	74	73	72	..	67	69	69
SEP 12	..	65	69	68	69	68	..	63	66	65
SEP 19	..	67	71	71	73	73	..	66	70	69
SEP 26	..	65	67	69	70	70	..	62	66	65
OCT 3	..	66	67	69	69	69	..	63	65	65
OCT 10	..	57	59	59	62	60	..	54	56	53
OCT 17	..	52	51	54	57	55	..	47	51	50
OCT 24	..	53	52	51	56	53	..	47	51	48
OCT 31	..	46	45	44	49	45	..	40	44	42
NOV 7	..	46	47	49	49	46	..	42	45	44

WEEK ENDING	OXFORD G	OXFORD B	CALDWELL G	CALDWELL B	JACKSON G	JACKSON B
APR 4	..	51	..	54	..	51
APR 11	..	53	..	53	..	51
APR 18	..	51	..	52	..	50
APR 25	..	53	..	51	..	50
MAY 2	..	54	..	52	..	52
MAY 9	..	60	..	57	..	56
MAY 16	..	65	..	64	..	64
MAY 23	..	68	..	66	..	65
MAY 30	..	68	..	67	..	67
JUN 6	..	75	..	71	..	70
JUN 13	..	75	..	72	..	71
JUN 20	..	79	..	78	..	77
JUN 27	..	85	..	83	..	82
JUL 4	..	79	..	77	..	76
JUL 11	..	87	..	85	..	84
JUL 18	.	86	..	83	..	81
JUL 25	..	79	..	77	..	78
AUG 1	..	83	..	82	..	80
AUG 8	..	83	..	85	..	83
AUG 15	..	82	..	87	..	84
AUG 22	..	84	..	83	..	82
AUG 29	..	75	..	76	..	75
SEP 5	..	71	..	72	..	70
SEP 12	..	67	..	68	..	66
SEP 19	..	71	..	69	..	71
SEP 26	..	67	..	67	..	68
OCT 3	..	66	..	68	..	67
OCT 10	..	57	..	58	..	57
OCT 17	..	53	..	52	..	51
OCT 24	..	52	..	51	..	50
OCT 31	..	46	..	46	..	43
NOV 7	..	46	..	48	..	46

G=GRASS B=BARE

LAST OCCURRENCE OF CRITICAL FAHRENHEIT TEMPERATURES IN SPRING 1988

STATIONS	20		24		28		30		32		36		40		43	
	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY
HOYTVILLE	3	23	4	26	4	26	4	26	4	26	5	26	6	5	6	12
FREMONT	3	22	3	23	4	19	4	20	4	25	4	26	5	14	6	10
WILLARD	3	23	4	20	4	26	4	26	5	2	5	8	6	11	6	28
CELINA	3	21	3	23	4	20	4	20	4	26	5	5	5	26	6	11
S CHARLESTON	3	16	4	20	4	21	4	30	4	30	5	1	6	11	6	12
RIPLEY	3	16	3	19	4	20	4	20	4	21	4	30	6	12	6	12
WOOSTER	3	23	3	23	4	17	4	27	5	2	5	27	6	12	6	12
CANFIELD	4	21	4	23	5	2	5	27	5	27	6	12	6	12	6	28
COSHOCTON	3	22	3	23	3	23	4	20	4	20	4	21	5	26	6	10
OSU COLUMBUS	3	22	3	22	4	20	4	26	4	26	4	30	6	10	6	11
CALDWELL	3	23	3	23	4	21	4	21	4	21	5	27	6	12	6	12
JACKSON	3	12	4	21	4	26	4	30	5	3	6	12	6	12	6	13
GRAPE BRANCH	3	23	3	29	4	23	4	26	5	2	5	27	5	27	6	12
WILMINGTON	3	16	3	23	4	16	4	20	4	26	5	1	5	26	6	11
MARION	3	22	3	23	4	20	4	20	4	25	5	2	6	11	6	11
CIRCLEVILLE	3	26	3	30	5	5	5	5	5	5	5	5	5	19	6	11
OXFORD	3	16	3	23	4	21	4	26	4	26	4	30	6	11	6	12
DELAWARE	3	23	3	23	4	26	4	26	4	27	5	27	6	12	6	12
AKRON CANTON	3	22	3	22	4	20	4	20	4	20	4	25	6	10	6	11
CINCINNATI	3	16	3	19	4	20	4	20	4	25	4	29	5	26	6	11
CLEVELAND	3	22	3	22	4	19	4	20	4	20	5	2	5	26	6	11
COLUMBUS	3	15	3	22	4	20	4	20	4	20	4	30	5	26	6	11
DAYTON	3	5	3	22	4	19	4	19	4	25	4	29	5	25	5	25
FINDLAY	3	22	3	22	4	16	4	25	4	25	4	29	5	25	5	26
MANSFIELD	3	22	3	22	4	20	4	21	4	25	4	29	6	10	6	10
TOLEDO	3	22	4	19	4	19	4	25	4	25	5	4	6	11	6	11
YOUNGSTOWN	3	22	3	28	4	22	5	26	5	26	5	26	6	11	6	18
ZANESVILLE	3	21	3	22	4	20	4	20	4	25	5	26	6	11	6	11
HUNTINGTON	2	26	3	16	4	20	4	20	4	25	4	25	5	26	6	11
PARKERSBURG	3	15	3	22	4	20	4	20	4	20	5	26	6	11	6	11

FIRST OCCURRENCE OF CRITICAL FAHRENHEIT TEMPERATURES IN FALL 1988

STATIONS	20		24		28		30		32		36		40		43	
	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY
HOYTVILLE	11	1	10	7	10	7	10	6	10	6	10	4	7	2	7	2
FREMONT	10	31	10	13	10	6	10	6	10	6	10	4	10	4	7	1
WILLARD	11	1	10	14	10	7	10	7	10	5	10	5	7	2	6	28
CELINA	12	9	10	31	10	14	10	7	10	7	10	7	10	5	7	2
S CHARLESTON	12	3	10	13	10	7	10	7	10	5	10	5	9	7	7	2
RIPLEY	12	2	10	13	10	12	10	6	10	6	10	4	10	4	7	1
WOOSTER	11	1	10	28	10	9	10	7	10	5	10	5	7	2	6	29
CANFIELD	10	31	10	14	10	9	10	5	10	5	10	4	6	29	6	28
COSHOCTON	12	10	12	2	10	14	10	13	10	12	10	6	8	7	8	7
OSU COLUMBUS	12	10	10	27	10	13	10	12	10	6	10	4	9	7	9	6
CALDWELL	12	10	11	25	10	13	10	7	10	7	10	5	9	8	7	2
JACKSON	10	14	10	7	10	7	10	6	10	6	9	8	7	2	7	2
GRAPE BRANCH	12	11	10	31	10	31	10	28	10	15	10	9	10	5	9	30
WILMINGTON	12	2	10	13	10	6	10	6	10	4	10	4	7	1	7	1
MARION	12	10	10	31	10	13	10	6	10	5	10	4	9	7	9	6
CIRCLEVILLE	11	1	10	13	10	6	10	6	10	6	7	1	7	1	7	1
OXFORD	12	10	10	14	10	13	10	12	10	7	10	5	9	7	9	7
DELAWARE	11	1	10	28	10	7	10	7	10	5	10	5	9	8	7	1
AKRON CANTON	12	9	10	30	10	27	10	14	10	12	10	4	10	4	7	1
CINCINNATI	12	10	10	29	10	12	10	12	10	8	10	4	10	4	9	7
CLEVELAND	10	31	10	31	10	27	10	14	10	14	10	14	10	4	9	25
COLUMBUS	12	10	10	27	10	13	10	12	10	6	10	4	9	7	9	6
DAYTON	12	2	10	31	10	13	10	12	10	12	10	6	10	4	9	6
FINDLAY	12	11	10	30	10	13	10	6	10	6	10	4	10	4	9	6
MANSFIELD	10	30	10	30	10	13	10	8	10	6	10	4	10	4	7	1
TOLEDO	10	30	10	13	10	6	10	6	10	6	10	4	7	1	7	1
YOUNGSTOWN	10	31	10	31	10	27	10	14	10	6	10	4	8	22	7	1
ZANESVILLE	12	10	10	13	10	13	10	6	10	6	10	4	9	7	7	1
HUNTINGTON	12	11	10	27	10	13	10	13	10	6	10	6	10	5	9	7
PARKERSBURG	12	10	10	13	10	13	10	12	10	6	10	6	9	7	9	7

CORN: Development by selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	Planted			Silked			Dent		
	1988	1987	Average	1988	1987	Average	1988	1987	Average
	Percent			Percent			Percent		
Apr. 30	38	29	23						
May 5	66	52	38						
10	81	75	54						
15	89	88	67						
20	93	94	74						
25	98	98	81						
30	100	100	87						
Jun. 5			92						
10			97						
15			99						
20			100						
Jul. 10				6	40	13			
15				14	66	29			
20				34	81	45			
25				53	90	61			
30				71	95	78			
Aug. 5				83	100	90	2	15	
10				91		95	5	32	
15				96		98	11	50	31
20				99		100	18	72	36
25				100			28	83	49
30							39	91	65
Sept 5							57	98	80
10							77	100	90
15							92		95
20							100		100

CORN: Development by selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	Mature			Harvested for grain			Harvested for silage		
	1988	1987	Average	1988	1987	Average	1988	1987	Average
	Percent			Percent			Percent		
Aug. 15		3					5	6	
20		10					6	11	6
25		21	6				7	20	11
30	1	32	10				10	33	16
Sep. 5	9	46	20				15	49	24
10	18	61	33		3		20	60	33
15	22	74	48		8		27	69	42
20	32	84	63	1	14	6	41	76	50
25	42	90	76	2	20	10	53	83	60
30	50	96	88	3	28	14	63	89	69
Oct. 5	62	100	94	5	38	18	72	93	77
10	73		97	9	50	25	80	96	83
15	83		100	14	64	32	86	97	88
20				22	76	41	92	99	92
25				31	85	50		100	96
30				42	90	58			
Nov. 5				56	94	66			
10				67	98	72			
15				75	100	78			
20				82		83			
25				87		87			
30						90			
Dec. 5						93			

SOYBEANS: Crop development by selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	Planted			Setting Pods		
	1988	1987	Average	1988	1987	Average
	Percent			Percent		
May 5	18	10	7			
10	36	19	15			
15	56	56	32			
20	73	69	43			
25	82	80	51			
30	90	88	59			
Jun. 5	94	92	72			
10	95	95	84			
15	99	98	92			
20	100	100	97			
25			99			
30			100			
Jul. 5						
10						
15				1	12	
20				6	26	
25				12	43	19
30				25	59	35
Aug. 5				57	80	57
10				78	91	70
15				88	96	83
20				89	100	90
25				91		97
30				96		100

SOYBEANS: Crop development by selected dates, Ohio, 1988, 1987 and 1983-87

Date	Leaves turning yellow			Mature			Harvested		
	1988	1987	Average	1988	1987	Average	1988	1987	Average
	Percent			Percent			Percent		
Aug 20		10							
25		28							
30	11	69	25						
Sep. 5	27	85	42		14				
10	47	97	61		30			5	
15	68	100	77		46	15		12	
20	81		91	15	62	28		20	7
25			97	27	76	45	6	29	15
30				44	87	62	12	39	22
Oct. 5				61	94	75	21	53	31
10				78	98	84	36	71	45
15					100	89	52	82	56
20						92	64	89	64
25						93	72	94	72
30						95	77	97	81
Nov. 5						97	86	98	86
10						98	90	99	89
15						99	93	100	92
20							96		94
25									96
30									97

WINTER WHEAT: Percent planted on selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	Planted*		
	1988	1987	Average
	Percent		
Sep. 20		3	3
25	10	7	7
30	22	22	16
Oct 5	35	44	30
10	52	62	46
15	70	76	58
20	81	85	69
25	87	92	79
30	92	95	87
Nov. 5	95	97	92
10	97	99	95
15	99	100	98

*Planted for following year's harvest.

WINTER WHEAT: Crop development by selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	Headed			Harvested		
	1988	1987	Average	1988	1987	Average
	Percent			Percent		
May 15		4				
20	18	25	30			
25	47	51	40			
30	77	80	58			
Jun. 5	92	95	79			
10	94	100	92			
15	98		97			
20	100		99			
25				5		
30				24	15	7
Jul. 5				53	33	15
10				78	49	35
15				94	80	63
20				97	94	85
25				100	98	95
30					99	98
Aug 5					100	100

OATS: Crop development by selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	Planted			Headed			Harvested		
	1988	1987	Average	1988	1987	Average	1988	1987	Average
	Percent			Percent			Percent		
Apr. 5		38							
10	15	47	28						
15	32	51	37						
20	53	64	47						
25	74	78	60						
30	87	85	71						
May 5	93	90	78						
10	97	95	84						
15	100	97	89						
20		100	95						
Jun. 5				14	38	18			
10				26	58	33			
15				46	75	48			
20				67	84	61			
25				82	87	74			
30				88	72	85			
Jul. 5				96	98	94			
10							7	4	3
15							17	20	11
20							32	40	24
25							49	62	44
30							67	79	63
Aug. 5							86	88	77
10							92	94	86
15								98	
20								100	

OTHER HAY: Percent harvested on selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	First cutting			Second cutting			Third Cutting		
	1988	1987	Average	1988	1987	Average	1988	1987	Average
	Percent			Percent			Percent		
May 25	12	14							
30	30	25	16						
Jun 5	57	37	28						
10	71	51	41						
15	81	65	56						
20	87	74	67						
25	93	83	79						
30	95	88	86						
Jul 5	98	91	91	11	14				
10	100	95	94	22	21	14			
15		98		35	30	24			
20				40	40	37			
25				44	50	50			
30				49	63	62			
Aug 5				58	74	71	4	5	
10				67	80	76	6	12	
15				65	85	80	9	18	15
20				68	88	84	13	24	24
25				72	91	88	22	33	33
30				78			26	43	41
Sept 5							35	50	50
10							44	60	60
15							51	62	68
20							63	66	77
25							75	73	83
30							82	80	

ALFALFA HAY: Percent harvested on selected dates, Ohio, 1988, 1987 and 1983-87 average

Date	First cutting			Second cutting			Third Cutting		
	1988	1987	Average	1988	1987	Average	1988	1987	Average
	Percent			Percent			Percent		
May 20	10	16							
25	25	30	17						
30	50	46	29						
Jun. 5	78	65	46						
10	89	79	61						
15	95	88	74						
20	97	94	85		6				
25	99	97	92	11	14				
30	100	100	97	23	22				
Jul. 5			98	37	32	22			
10			99	51	42	32			
15			100	66	56	46			
20				71	64	60			
25				78	75	73			
30				85	82	83			
Aug. 5				89	90	89	15	20	17
10				92	95	93	26	31	23
15				95	98	96	35	42	33
20				98			45	51	45
25							59	54	56
30							68	69	68
Sept 5							78	76	78
10							86	82	85
15							91	85	89
20							94	89	93
25							97	93	98
30								97	99

DAYS FAVORABLE FOR FIELD WORK: OHIO, 1988, 1987 AND AVERAGE 1983-87

Date	1988		1987		1983-87	
	7-day	Cumulative	7-day	Cumulative	7-day	Cumulative
	Number of days					
Apr. 8	1.2	1.2				
15	5.2	6.4	1.7	1.7	2.3	2.3
22	5.6	12.0	3.6	5.3	2.8	5.1
29	5.4	17.4	4.1	7.4	4.6	9.7
May 6	6.0	23.4	5.0	14.4	3.5	13.2
13	6.0	29.4	6.8	21.2	5.0	18.2
20	5.7	35.1	4.3	25.5	3.3	21.5
27	5.7	40.8	4.0	29.5	3.2	24.7
Jun. 3	6.3	47.1	3.8	33.3	4.0	28.7
10	6.8	53.9	5.2	38.5	5.1	33.8
17	6.6	60.5	5.3	43.8	4.6	38.4
24	6.9	67.4	4.4	48.2	5.2	43.6
Jul. 1	6.9	74.3	3.8	52.0	4.9	48.5
8	7.0	81.3	2.9	54.7	4.2	52.7
15	6.9	88.2	4.8	59.?	5.3	58.0
22	4.2	92.4	6.6	66.3	6.0	64.0
29	5.7	98.1	6.8	73.1	6.1	70.1
Aug. 5	6.3	104.4	6.2	79.3	5.8	75.9
12	6.2	110.6	6.5	85.8	5.4	81.3
19	6.1	116.7	6.8	92.6	6.4	87.7
26	5.5	122.2	5.5	98.1	5.9	93.6
Sep. 2	5.5	127.7	4.1	102.2	5.4	99.0
9	4.6	132.3	6.4	108.6	6.0	105.0
16	5.2	137.5	5.3	113.9	5.9	110.9
23	5.1	142.6	4.7	118.6	5.3	116.2
30	6.5	149.1	5.7	124.3	4.9	121.1
Oct. 7	6.2	155.3	5.0	129.3	4.2	125.3
14	6.4	161.7	3.3	132.6	4.9	130.2
21	4.0	165.7	6.1	138.7	4.7	134.9
28	4.5	170.2	5.4	144.1	4.4	139.3
Nov. 4	5.7	175.9	6.7	150.8		
11	2.6	178.5				
18	4.6	183.1				
25						

CONSUMPTION OF COMMERCIAL FERTILIZERS, OHIO, 1985 TO 1988

Specified mixtures and materials	Year ending June 30			
	1985	1986 1/	1987 1/	1988 1/
	Tons			
Mixed fertilizers, all	664,427	617,302	560,356	546,122
18-46-0	132,141	156,772	135,238	135,061
6-24-24	71,583	64,757	44,476	36,135
19-19-19 2/	7,740	17,389	18,554	18,054
Anhydrous ammonia	144,174	138,054	149,620	125,354
Urea	98,732	148,660	123,243	100,485
Ammonium nitrate	7,858	9,802	7,265	6,636
Ammonium sulfate	18,222	17,968	16,477	20,261
Nitrogen solutions	426,219	467,088	422,553	409,855
Superphosphates	62,405	68,382	46,417	40,644
Potassium chloride	386,854	439,415	389,527	419,933
Organics	2,115	0	0	0
Total all fertilizers 3/	1,838,633	1,951,387	1,768,260	1,697,398
Primary Plant Nutrients				
N	363,695	404,812	373,352	332,686
Available P2O5	201,322	205,917	178,719	175,123
K2O	320,207	346,396	308,329	324,687
Total Nutrients	885,224	957,124	860,400	832,497

1/ From Commercial Fertilizers published by Tennessee Valley Authority , Economics and Marketing Staff, National Fertilizer Developement Center. Earlier years published by U.S. Dept. of Agriculture, National Agricultural Statistics Service. 2/ In 1985, 15-15-15 was used. 3/ Not sum of above specified mixtures and materials.

FERTILIZER AND PESTICIDE USE,ON CORN, WHEAT AND SOYBEAN ACERAGE OHIO, 1988 1/

Crop	Acres harvested	Acres receiving			Rate per acre receiving			Acres treated with	
		N	P2O5	K2O	N	P2O5	K2O	Herbicides	Insecticides
	Thousand	Percent			Pounds			Percent	
Corn	3,300	99	96	93	158	80	111	98	38
Soybeans	3,900	20	35	46	17	46	102	94	2/
Wheat	920	100	96	96	70	60	76	2/	2/

1/Based on 1988 Objective Yield Surveys. Published Agricultural Resources Inputs, February 1989. 2/ No data available

AVERAGE PRICES PAID BY FARMERS PER TON FOR SELECTED COMMERCIAL FERTILIZERS IN NORTH CENTRAL STATES 1/

Selected fertilizer	April 15, 1987	October 15, 1987	April 15, 1988	October 15, 1988
	Dollars per ton			
5-20-20	146	154	171	167
6-24-24	176	183	207	208
8-32-16	194	198	223	220
10-34-0	212	211	234	232
12-12-12	142	150	166	162
15-15-15	157	165	178	186
18-46-0	221	233	253	247
Ammonium nitrate	147	142	155	160
Urea 44-46%	160	159	184	185
Anhydrous ammonia	183	177	205	190
Nitrogen solution 28%	104	104	127	121
Super phosphate 44-46%	190	204	220	217
Muriate of potash 60%	114	135	156	156

1/Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin.

FERTILIZER NUTRIENT AND PRODUCT TON, DELIVERIES BY COUNTY, JULY 1987-JUNE 1988

COUNTY	N tons	P tons	K tons	Prod. tons	COUNTY	N tons	P tons	K tons	Prod. tons
ADAMS	9,362	4,959	9,117	45,336	LICKING	1,851	893	1,002	9,461
ALLENS	4,086	2,070	3,492	19,257	LOGAN	3,712	2,541	4,407	23,099
ASHLAND	4,595	2,274	4,758	21,326	LORAIN	1,948	2,141	7,885	21,121
ASHTABULA	4,912	4,414	5,485	27,094	LUCAS	2,141	962	2,142	10,106
ATHENS	293	152	253	1,254	MADISON	5,888	3,167	5,468	32,140
AUGLAIZE	7,877	5,122	8,488	44,408	MAHONING	2,763	1,771	3,045	14,996
BELMONT	596	655	767	3,748	MARION	8,568	4,394	6,574	44,050
BROWN	1,314	760	1,034	6,339	MEDINA	797	509	1,088	4,787
BUTLER	3,006	1,310	2,285	15,432	MEIGS	230	147	171	1,051
CARROL	378	285	327	2,069	MERCER	6,054	3,629	6,718	36,591
CHAMPAIGN	12,049	4,218	6,499	45,943	MIAMI	4,622	2,678	4,674	25,325
CLARK	4,775	1,891	3,488	20,048	MONROE	68	78	87	485
CLERMONT	458	176	323	2,572	MONTGOMERY	5,469	1,241	2,129	16,621
CLINTON	9,606	3,728	6,645	40,931	MORGAN	3	3	3	20
COLUMBIANA	1,270	2,182	2,294	10,291	MORROW	3,590	2,003	21,829	49,684
COSHOCTON	1,473	530	1,008	5,889	MUSKINGUM	1,251	412	1,458	6,516
CRAWFORD	7,872	4,156	8,246	40,442	NOBLE	44	64	54	327
CUYAHOGA	346	311	285	2,350	OTTAWA	3,097	2,295	3,387	18,714
DARKE	8,406	3,862	7,488	38,852	PAULDING	4,052	2,084	2,525	16,977
DEFIANCE	2,524	1,521	2,180	11,989	PERRY	397	119	350	1,404
DELAWARE	3,288	1,739	3,414	19,461	PICKAWAY	12,209	4,544	8,367	54,770
ERIE	2,238	1,212	2,322	11,000	PIKE	633	394	565	3,215
FAIRFIELD	4,957	1,564	2,693	21,068	PORTAGE	901	539	1,192	5,396
FAYETTE	7,591	3,860	7,921	39,399	PREBLE	7,943	3,340	7,618	38,689
FRANKLIN	2,574	1,080	1,229	11,378	PUTNAM	9,421	5,031	8,926	47,641
FULTON	8,227	2,912	6,936	36,072	RICHLAND	5,692	3,273	6,034	29,876
GALLIA	126	69	83	762	ROSS	1,723	600	461	7,321
GEAUGA	492	424	340	2,761	SANDUSKY	5,900	3,442	10,282	41,374
GREENE	5,513	2,345	3,865	20,935	SCIOTO	151	53	72	650
GUERNSEY	481	246	464	2,409	SENECA	8,707	5,229	11,147	50,635
HAMILTON	520	100	369	2,721	SHELBY	3,907	2,560	3,709	23,198
HANCOCK	8,163	4,991	7,627	42,618	STARK	2,897	2,025	3,130	17,519
HARDIN	5,027	1,980	3,768	20,608	SUMMIT	173	106	135	1,084
HARRISON	203	110	190	1,147	TRUMBULL	1,237	1,300	1,490	7,240
HENRY	8,770	4,338	8,237	42,386	TUSCARAWAS	2,883	1,513	2,961	14,681
HIGHLAND	5,196	3,670	6,158	30,879	UNION	6,715	3,423	6,222	37,135
HOCKING	261	198	295	1,537	VAN WERT	7,868	4,332	6,404	37,096
HOLMES	547	351	529	3,003	VINTON	1	0	0	3
HURON	9,115	6,644	6,010	41,946	WARREN	3,194	1,191	3,006	13,570
JACKSON	1,068	773	1,192	5,994	WASHINGTON	1,651	971	1,382	7,398
JEFFERSON	285	314	408	1,922	WAYNE	5,684	4,143	6,252	33,436
KNOX	3,650	2,190	3,415	20,613	WILLIAMS	9,359	3,342	6,282	37,180
LAKE	202	116	166	1,084	WOOD	9,010	4,378	8,174	45,349
LAWRENCE	104	47	38	428	WYANDOT	4,495	2,222	3,760	21,806

COMMERCIAL FLORICULTURE: Numbers of growers with gross sales of $10,000 or greater, area in production, quantities sold, percent sold wholesale, average price per unit and value of total sales at wholesale, Ohio, 1987 and 1988.

CROP	NUMBER OF PRODUCERS		GROSS AREA PRODUCTION (1000 SQ FT)		INTENDED PRODUCTION (1000 SQ FT)	UNIT	QUANTITY SOLD TOTAL UNITS (1000 UNITS)		PERCENT OF SALES SOLD WHOLESALE		WHOLESALE PRICE (DOLLARS)		WHOLESALE VALUE OF TOTAL SALES (1000 DOLLARS)	
	1987	1988	1987	1988	1989	UNIT	1987	1988	1987	1988	1987	1988	1987	1988
CUT FLOWERS														
CARNATIONS														
STANDARD 1/	-	-	-	-	-	BLOOMS	-	-	-	-	-	-	-	-
MINIATURE 1/	-	-	-	-	-	BUNCHES	-	-	-	-	-	-	-	-
ROSES														
HYBRID TEA	15	14	810	744	711	BLOOMS	12,216	11,863	100	99	.491	.503	5,998	5,967
SWEETHEART	11	10	162	119	110	BUNCHES	4,329	2,740	100	100	.318	.324	1,377	888
CHRYSANTHEMUMS														
STANDARD	72	52	232	196	162	BLOOMS	828	605	52	73	.636	.735	527	445
POMPON	82	64	348	300	272	BUNCHES	330	366	59	62	2.49	2.57	822	941
GLADIOLI 1/	-	-	-	-	-	SPIKES	-	-	-	-	-	-	-	-
OTHER CUT FLOWERS 1/	84	-	486	-	-				79	-			1,242	-
POTTED PLANTS 4/														
AFRICAN VIOLETS	35	29	1,054	902	4,754	POTS	5,158	4,980	99	98	1.04	1.01	5,342	5,037
CHRYSANTHEMUMS	92	93	1,082	1,201	1,992	POTS	2,119	1,993	96	97	2.36	2.19	5,010	4,366
AZALEAS	63	67	209	325	294	POTS	226	347	93	96	5.42	4.71	1,225	1,633
LILLIES														
EASTER	149	156	537	488	708	POTS	663	646	92	91	3.50	3.49	2,319	2,247
OTHER	31	29	37	23	36	POTS	35	33	77	85	4.40	3.24	154	107
POINSETTIAS	268	284	4,247	4,501	4,650	POTS	3,174	3,259	85	86	3.37	3.30	10,689	10,739
OTHER FLOWERING	83	168	1,494	1,098	1,311	POTS	2,285	1,052	98	84	2.29	2.20	5,222	2,319
POTTED FOLIAGE 5/	102	89	1,052	956	972	POTS			87	89			5,760	7,707
HANGING BASKETS 2/														
FLOWERING	388	365			1,919	BASKETS	1,379	1,332	82	72	5.35	5.22	7,378	6,953
FOLIAGE	205	115			1,456	BASKETS	2,486	1,495	96	97	3.78	3.87	9,397	5,786
BEDDING/FLATS 3/														
GERANIUMS	203	208	847	788	463	FLATS	436	322	80	78	7.65	6.90	3,335	2,222
FLOWRNG/FOLIAGE	384	458	10,223	10,567	6,161	FLATS	5,083	5,225	81	76	4.98	5.51	25,313	28,790
VEGETABLE	350	423	1,712	1,927	981	FLATS	841	901	71	61	4.83	5.18	4,062	4,667
BEDDING PLANTS 4/														
HARDY MUMS	199	183	1,474	1,226	2,079	POTS	2,459	2,040	48	35	1.49	1.56	3,668	3,184
GERANIUMS														
CUTTINGS	327	356	2,336	2,570	5,309	POTS	6,432	5,352	73	70	1.06	1.08	6,841	5,784
SEEDED	204	218	1,058	1,373	2,860	POTS	3,291	3,710	75	72	.860	.950	2,821	3,519
OTHER POTTED	190	271	858	1,290	3,270	POTS	2,799	3,677	72	78	.994	1.23	2,783	4,512
VEGETABLE POTS	114	115	255	187	500	POTS	695	531	66	43	1.532	1.10	1,065	584
TOTAL	500	550	22,002	23,665 (GREENHOUSE)									112,582	112,272
			230	260 (OTHER COVERED)										
			72	87 (OPEN GROUND ACRES)										

	POTTED PLANTS SOLD BY SIZE OF POT (1,000 POTS) OHIO 1988			COUNTY RANKING				
	-5"	5+"	TOTAL	EQUIV WHLSL VALUE	PRODUCTION AREA COVERED	NO. OF FIRMS REPORTING	WHOLESALE VALUE FLOWERING FOLIAR BEDDING	WHOLESALE VALUE VEGETABLE TYPE BEDDING
AFRICAN VIOLETS	4,977	3	4,980	LORAIN	LUCAS	HAMILTON	LUCAS	LUCAS
CHRYSANTHEMUMS	937	1,056	1,993	LUCAS	LORAIN	CUYAHOGA	LORAIN	GEAUGA
AZALEAS	42	305	347	CUYAHOGA	CUYAHOGA	LUCAS	CUYAHOGA	FRANKLIN
EASTER LILLIES	3	643	646	FRANKLIN	HAMILTON	FRANKLIN	LAKE	CUYAHOGA
OTHER LILLIES	9	24	33	HAMILTON	FRANKLIN	LORAIN	FRANKLIN	LORAIN
POINSETTIAS	645	2,614	3,259	CLARK	LAKE	LAKE	FULTON	SUMMIT
OTHER FLOWERING	564	488	1,052	SUMMIT	MONTGOMERY	SUMMIT	GEAUGA	FULTON

1/ Data not published to avoid disclosure of individual operations. 2/ Intended production is in 1,000 baskets. 3/ Intended production is in 1,000 flats. 4/ Intended production is in 1,000 pots. 5/ Intended production is in 1,000 sq. ft. and value of total sales equals net value of sales.

OHIO ESTIMATES
BERRIES: PRODUCTION AND VALUE 1/

Type	1987 Harvested Acres 1/	1987 Yield 1/	1988 Farm Unit Value	Farm Crop Value
	Acres	Lbs. per acre	Dollars	Thousand dollars
Raspberries (red and black)	435	1,424	1.79/lb.	1,109
Blackberries	53	1,592	1.36/lb.	115
Blueberries	191	1,653	0.85/lb.	268
Elderberries, Gooseberries, and Currants	40	2/	2/	2/

1/ Information obtained from the 1987 Census of Agriculture and USDA
2/ Not available at time of publication

OHIO ESTIMATES
HORSES: NUMBER ON FARMS

Type	As of December 31 of each year			
	1974	1978	1982	1987
	Thousands			
All Horses & Ponies 1/	59,318	79,342	76,514	75,379
Registered Trotting Horses 2/	3/	3/	3/	2,814

1/ Information obtained from the 1987 Census of Agriculture
2/ Information obtained from the U.S. Trotting Association
3/ Not available at time of publication

OHIO ESTIMATES: NURSERY & GREENHOUSE CROPS, MUSHROOMS & SOD GROWN FOR SALE:

1987 AND 1982 1/

Geographic area	1987				1982			
	Farms	Sq. ft. under glass or other protection	Acres in the open	Sales ($1,000)	Farms	Sq. ft. under glass or other protection	Acres in the open	Sales ($1,000)
POTTED FLOWERING PLANTS								
State Total								
Ohio	333	5 884 099	70	30 476	(NA)	(NA)	(NA)	(NA)
Counties								
Allen	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Ashtabula	4	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Belmont	3	(D)	-	22	(NA)	(NA)	(NA)	(NA)
Butler	7	(D)	(D)	523	(NA)	(NA)	(NA)	(NA)
Champaign	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Clark	4	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Clermont	7	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Columbiana	8	272 500	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Crawford	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Cuyahoga	16	810 115	(D)	3 013	(NA)	(NA)	(NA)	(NA)
Darke	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Defiance	3	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Delaware	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Erie	5	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Fairfield	5	20 500	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Franklin	13	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Geauga	8	22 105	(D)	97	(NA)	(NA)	(NA)	(NA)
Greene	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Hamilton	82	(D)	1	(D)	(NA)	(NA)	(NA)	(NA)
Hancock	4	16 550	-	95	(NA)	(NA)	(NA)	(NA)
Knox	3	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Lake	13	(D)	(D)	2 666	(NA)	(NA)	(NA)	(NA)
Licking	6	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Logan	3	10 761	-	(D)	(NA)	(NA)	(NA)	(NA)
Lorain	14	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Lucas	11	234 452	(D)	615	(NA)	(NA)	(NA)	(NA)
Mahoning	7	283 500	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Medina	8	111 120	-	(D)	(NA)	(NA)	(NA)	(NA)
Meigs	4	(D)	(D)	40	(NA)	(NA)	(NA)	(NA)
Miami	7	48 764	(D)	122	(NA)	(NA)	(NA)	(NA)
Montgomery	12	116 068	(D)	882	(NA)	(NA)	(NA)	(NA)
Morrow	3	(D)	(D)	4	(NA)	(NA)	(NA)	(NA)
Ottawa	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Pickaway	5	8 950	(D)	41	(NA)	(NA)	(NA)	(NA)
Portage	7	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Putnam	4	52 150	(D)	124	(NA)	(NA)	(NA)	(NA)
Richland	3	54 000	-	(D)	(NA)	(NA)	(NA)	(NA)
Ross	3	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Stark	16	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Summit	10	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Trumbull	10	(D)	(D)	181	(NA)	(NA)	(NA)	(NA)
Tuscarawas	3	(D)	-	(D)	(NA)	(NA)	(NA)	(NA)
Warren	3	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Washington	8	60 435	-	241	(NA)	(NA)	(NA)	(NA)
Wayne	3	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
All other counties	37	400 610	2	2 891	(NA)	(NA)	(NA)	(NA)
MUSHROOMS								
State Total								
Ohio	6	693 274	(X)	9 463	6	727 002	(X)	4 874
NURSERY CROPS								
State Total								
Ohio	632	3 685 242	14 161	66 196	580	3 784 695	12 310	38 241
Counties								
Adams	4	-	(D)	19	3	-	5	6
Allen	5	-	29	85	4	-	(D)	27
Ashland	4	(D)	(D)	(D)	8	-	13	23
Ashtabula	20	67 230	317	812	12	-	(D)	211
Butler	16	(D)	161	612	16	(D)	203	293
Carroll	10	(D)	(D)	1 392	4	(D)	(D)	(D)
Clark	10	(D)	1 640	6 190	7	468 000	1 326	4 398
Clermont	8	245 450	24	287	9	(D)	81	359
Columbiana	13	(D)	140	400	9	-	81	(D)
Coshocton	7	(D)	(D)	(D)	6	(D)	92	198
Cuyahoga	10	(D)	111	(D)	19	(D)	74	360
Darke	7	(D)	(D)	29	7	-	47	66
Delaware	11	(D)	173	1 449	6	(D)	54	117
Erie	7	-	(D)	540	7	-	38	91
Fairfield	14	-	188	314	6	-	(D)	129
Franklin	15	(D)	372	1 911	10	(D)	(D)	677
Geauga	13	11 975	67	(D)	18	(D)	222	507
Greene	6	876 000	(D)	1 371	6	-	(D)	677
Guernsey	5	(D)	(D)	27	(NA)	(NA)	(NA)	(NA)
Hamilton	20	(D)	66	300	17	(D)	58	406

OHIO ESTIMATES: NURSERY & GREENHOUSE CROPS, MUSHROOMS & SOD GROWN FOR SALE:

1987 AND 1982 1/

Geographic area	1987				1982			
	Farms	Sq. ft. under glass or other protection	Acres in the open	Sales ($1,000)	Farms	Sq. ft. under glass or other protection	Acres in the open	Sales ($1,000)
NURSERY CROPS—Con.								
Counties—Con.								
Henry	4	-	(D)	(D)	4	-	(D)	(D)
Highland	3	-	(D)	(D)	4	(D)	(D)	(D)
Jackson	4	-	(D)	44	(NA)	(NA)	(NA)	(NA)
Jefferson	3	-	(D)	(D)	3	-	(D)	(D)
Knox	4	-	47	82	3	(D)	28	(D)
Lake	70	810 679	3 380	25 835	75	2 454 651	4 207	16 173
Licking	11	(D)	637	1 042	7	(D)	(D)	(D)
Logan	8	-	(D)	58	(NA)	(NA)	(NA)	(NA)
Lorain	18	(D)	384	(D)	22	(D)	230	1 718
Lucas	23	107 325	139	765	13	(D)	67	84
Mahoning	12	(D)	80	288	12	-	72	178
Marion	3	-	11	(D)	(NA)	(NA)	(NA)	(NA)
Medina	20	(D)	134	240	18	(D)	84	98
Miami	4	(D)	22	(D)	6	(D)	158	381
Montgomery	15	217 001	357	1 867	14	(D)	377	1 041
Morgan	3	-	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Muskingum	7	(D)	39	47	3	(D)	(D)	6
Perry	4	-	(D)	87	4	-	71	44
Pickaway	3	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Portage	14	78 610	207	406	8	(D)	(D)	136
Richland	8	(D)	(D)	(D)	11	(D)	(D)	1 015
Ross	4	-	(D)	(D)	(NA)	(NA)	(NA)	(NA)
Sandusky	4	-	7	17	7	(D)	71	102
Stark	30	310 600	163	957	23	(D)	82	323
Summit	25	(D)	114	306	29	(D)	199	375
Trumbull	17	17 644	51	190	16	23 900	(D)	107
Tuscarawas	9	-	(D)	69	7	(D)	(D)	48
Union	6	15 304	(D)	411	4	(D)	27	146
Van Wert	3	-	21	92	5	(D)	(D)	189
Warren	25	32 390	441	2 970	20	(D)	526	1 586
Washington	10	2 714	53	216	4	-	(D)	(D)
Wayne	15	(D)	478	1 190	15	(D)	322	697
Wood	3	-	6	14	4	-	(D)	13
All other counties	37	120 980	587	2 712	(NA)	(NA)	(NA)	(NA)
SOD HARVESTED								
State Total								
Ohio	39		3 959	9 143	48	(X)	4 021	4 589
Counties								
Delaware	3	(X)	(D)	10	3	(X)	(D)	(D)
Franklin	3	(X)	(D)	(D)	3	(X)	(D)	(D)
Greene	4	(X)	(D)	(D)	5	(X)	614	686
Montgomery	3	(X)	(D)	(D)	4	(X)	91	(D)
Union	6	(X)	389	849	4	(X)	197	497
Warren	6	(X)	322	754	7	(X)	172	491
All other counties	14	(X)	1 274	2 812	(NA)	(X)	(NA)	(NA)
GREENHOUSE VEGETABLES								
State Total								
Ohio	77	3 959 018	(X)	7 715	91	5 972 087	(X)	8 518
Counties								
Carroll	3	17 520	(X)	(D)	(NA)	(NA)	(X)	(NA)
Cuyahoga	7	786 716	(X)	(D)	15	1 843 540	(X)	2 324
Hamilton	13	585 200	(X)	797	18	940 400	(X)	1 189
Lorain	9	1 088 780	(X)	(D)	16	1 443 000	(X)	2 776
Lucas	4	(D)	(X)	(D)	(NA)	(NA)	(X)	(NA)
Medina	3	(D)	(X)	(D)	5	(D)	(X)	(D)
All other counties	38	886 662	(X)	1 394	(NA)	(NA)	(X)	(NA)

1/ Information obtained from the 1987 Census of Agriculture

THE OHIO DEPARTMENT OF AGRICULTURE

Richard F. Celeste
GOVERNOR

Steven D. Maurer
DIRECTOR

1988 Annual Report

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THE OHIO DEPARTMENT OF AGRICULTURE IS AN EQUAL OPPORTUNITY EMPLOYER

DIVISION OF ADMINISTRATION

The Division of Administration is responsible for providing services to enhance the smooth operations of all divisions. Administration consists of the Human Resources Section, (i.e.Personnel and Labor Relations) as well as the Fiscal Office and the Division of Marketing and Communications. Each of these areas provide administrative support to all employees within the Department, and administration coordinates and supervises all activities of the Department.

EMPLOYEES BY DIVISION
(As of January 31, 1989)

Administration	59
Marketing & Communications	12
Animal Industry	58
Foods, Dairies, & Drugs	33
Grading	39
Plant Industry	69
Weights & Measures	16
Consumer Analytical Lab	13
Meat Inspection	178
Rides	16
Grain Warehouse	10
TOTAL EMPLOYEES	503

LABOR RELATIONS COORDINATOR

The Labor Relations Coordinator serves as the Director's designee to preside over 3rd Level Grievance hearings. The coordinator provides the Department with information and technical knowledge with regards to the Union contract and functions as the liaison between the Department and the Union; and between the Department and the State Office of Collective Bargaining.

AGRICULTURAL FINANCING COMMISSION

The Ohio Agricultural Financing Commission (OAFC) was created and authorized by the 115th General Assembly (H.B. 826) and officially began its operation on January 11, 1985. The Commission consists of nine members: Director Steven D. Maurer, Ohio Department of Agriculture; Director David Baker, Ohio Department of Development; Mary Ellen Withrow, Treasurer, State of Ohio; Joseph Brubaker, Member; Judith Hall, C.P.A.; Glenn Lackey, Member; James Lewis, Vice Chairman; Francis Less, Member; Joseph Luby, Member.

The Commission's original primary function was to issue tax-exempt revenue bonds to private lending institutions, thereby generating money which Ohio's farmers could borrow at low interest rates. Farmers could then use the money to acquire and improve agricultural land and equipment. In 1986, due to changes in the federal tax laws, the feasibility and effectiveness of issuing tax-exempt agricultural revenue bonds was greatly reduced. Accordingly, the Commission's activities were significantly reduced during the last half of 1986 and in 1987 because of the inability of lending institutions to capture the benefits of tax-exempt status on their cost of funds.

The main focus of the OAFC activities in 1987 was to research and analyze the possibility of creating a taxable bond program in addition to alternative financing programs. None of the programs were found to be economically feasible. The programs would have been structured to achieve the same objective of the tax-exempt program, i.e., enabling the farmers to borrow money from lending institutions at lower than commercial interest rates.

The activity of the OAFC was limited in 1988. Two tax-exempt bonds were issued for $362,000 and two were approved for $362,000. The number of requests for information increased during 1988, but market interest rates also increased at the same time. The tax-exempt bond program in agriculture has a sunset date of December 31, 1989. Unless the sunset is extended or completely lifted, the tax-exempt bond program will terminate at the end of the 1989 calendar year.

Also in 1988, the OAFC researched an Ohio Conservation Reserve Enhancement Program (CRP) that would enable participants of the Federal CRP Program to receive their future ten-year payments immediately at a discounted valued amount. The Program would use the OAFC's bonding authority to borrow against future CRP payments to generate a current value lump sum payment to the

program participants. Payments could be used to pay off real estate debt or reduce principals on outstanding debt balances, thus helping the cash flow positions of farm borrowers. The OAFC continues to pursue the possibility of implementing such a program by the year 1990.

SUMMARY OF 1987 RULE CHANGES

The Department rescinded two rules in 1988. The first rule prescribed the specific methods to be used in the calibration of milk testing machines. This rule was replaced by a one page rule requiring milk testers to follow the calibration methods prescribed by the manufacturer of the particular machine being used. The second rule rescinded dealt with the eradication of Barberry bushes. These bushes are no longer considered to pose a problem in Ohio.

Ten rules were amended by the Department in 1988. Working with the Auditor's office, a uniform accounting system was established for agricultural societies; as a result, all societies in the state will now use the same accounting practices to file their annual financial report with the Department. The rules governing agricultural marketing programs were amended to allow a marketing committee to apply any monies collected from producers subject to an assessment to be applied to any arrearages due the marketing program from that particular producer.

In response to a concern of the grape industry over the potential spreadof disease from abandon vineyards; grapevines, when growing in a group of one hundred or more and unattended for at least two consecutive years, were added to the list of noxious weeds. The Department also reserved by rule, for its own use, the brand "F". This brand is used to mark livestock which, for purposes of disease control, may be imported into Ohio only for feeding purposes; they may not be used for breeding purposes.

The Department's Division of Amusement Ride Safety promulgated twenty new rules. Eleven of them establishing safety standards for various types of aquatic amusement rides and two new rules covering the operation of electronic games. Seventeen existing rules administered by the Division were updated to meet changes in the amusement industry.

Work was also begun on rules, to be adopted and implemented in 1989, regulating two new areas in which public interest has been expressed to the Department. The first of these areas centers on public notice of lawn chemical applications. New rules will provide for the type and method of public notice to be given by licensed chemical applicators when applying lawn chemicals. The second area to be addressed involves the establishment of a standard of identity for organically grown foods.

STATEMENT OF EXPENDITURES FISCAL YEAR 1988

OPERATING EXPENSES FUND 11	GENERAL REVENUE FUND
503 Swine and Cattle Breeder Awards	$8,420.00
401 Aujeskys Disease	117,711.12
405 Rodent Control	41,334.34
499 Meat Inspection (State Match)	3,256,573.08
501 County Agricultural Societies	201,999.45
413 Gypsy Moth Prevention	72,253.61
415 Poultry Disease Prevention	87,604.78
TOTAL SPECIAL PURPOSE ITEMS	$3,785,896.38
GRAND TOTAL EXPENDITURES ALL FUNDS	**$21,886,567.26**

OPERATING EXPENSES FUND 11	GENERAL REVENUE FUND
701 Administration	$2,998,502.89
702 Animal Industry	1,740,351.22
703 Foods, Dairies and Drugs	1,150,341.29
704 Markets	136,114.52
705 Plant Industry	1,906,616.06
706 Weights and Measures	631,221.76
708 Fairs & Amusement Ride Safety	454,930.64
709 Grain Warehouse	187,076.05
TOTAL OPERATING EXPENDITURES	**$9,205,154.43 ***

*includes salary, fringe benefits, maintenance & equipment

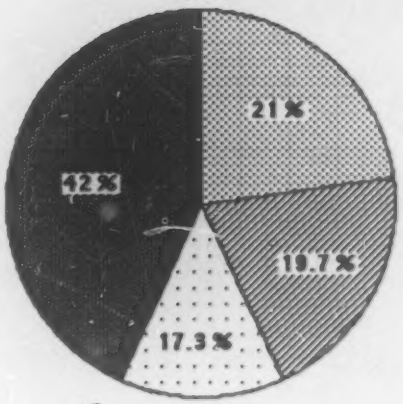
SPECIAL ACCOUNTS & STATE SPECIAL REVENUE ACCOUNTS *$4,596,329.51*

21 %

604	$98,391.52	625	$19,844.31
631	36,474.70	602	1,164,493.47
620	61,378.57	603	433,194.38
627	305,028.02	612	1,485,981.00
628	119,500.84	626	828,208.71
632	6,555.00	630	37,278.99

GENERAL OPERATING REVENUE ACCOUNTS *$9,205,154.43*

42 %



FEDERAL MONIES SPECIAL REVENUE ACCOUNTS *$4,299,186.94*

19.7 %

617	$144,930.91
601	692,597.32
618	3,461,658.71

SPECIAL PURPOSE GENERAL REVENUE ACCOUNTS *$3,785,896.33*

17.3 %

DIVISION OF ANIMAL INDUSTRY

This Division is charged with the promotion and protection of Ohio's livestock and poultry industry. The division is utilizing its new 18,000 square foot building, and hopes to be expanding Biological and Pathological services in the near future. The new computer network system is in place and the fruits of this endeavor are now beginning to be realized.

Tuberculosis - Ohio had no confirmed bovine tuberculosis during calendar year 1988. Tuberculosis surveillance has continued through inspection of Ohio cattle at slaughter and tuberculosis testing 36,614 head on farms.

Equine Infectious Anemia - EIA is a disease that is not transmitted to humans but may be lethal to horses. There were 7 positive horses found in Ohio in 1988.

Brucellosis - Brucellosis is communicable to humans. The disease causes abortion and other losses in cattle. No brucellosis infected cattle have been found in Ohio since April, 1986. The state of Ohio was declared Brucellosis Free on June 11, 1987. Brucellosis Free status permits Ohio cattle to move more freely in interstate commerce. Ohio continues to be validated free of swine brucellosis.

Pseudorabies - PRV is not contagious to humans, but may cause death in sheep, cattle, dogs, cats and causes clinical disease and death in swine. There were 98 newly infected herds found in 1988. On December 31, 1988, Ohio had 132 quarantined PRV herds.

During 1988, Ohio and other states conducted pseudorabies and brucellosis tests on 81,025 identified blood samples collected from Ohio swine at slaughter.

The PRV vaccination of non-infected herds in high risk areas is being encouraged. Use of a new gene deleted vaccine has been increasing since its approval in May, 1988. A differential test is being used in this laboratory with good results. Official approval of the differential test in progress at the national level. New PRV rules were implemented January 1, 1988. These rules have been effective in locating new cases of PRV and enhance the

ability to clean up an area infected with PRV. The PRV program demands on Division personnel and laboratory facilities continues to increase.

Licensing and Inspection - This section issues licenses to the following: livestock dealers, livestock auction markets, livestock concentration yards, slaughter establishments, livestock weighers, garbage feeders, rendering plants, and raw rendering material collectors. During 1988, this section issued 1,027 licenses.

The license and inspection section helps protect the livestock farmer when selling him animals by insuring accurate weights by requiring scales to be tested every six months. We require and monitor the record keeping system of dealers and markets so that epidemiological tracing can be accomplished in the event of disease outbreaks.

Swine garbage feeders are inspected monthly. At these inspections, the cooking temperature of the feed (garbage) is checked, the general sanitation of the premises is inspected and the health of the animals is evaluated. This program prevents the spread of exotic and domestic diseases.

Laboratory Services Unit - The Laboratory Services Unit provides the Division of Animal Industry with various tests and services for regulation and diagnostic efforts. Several serological test systems are in operation including agglutination, agar gel immuno-diffusion, complement fixation, serum-neutralization, hemagglutination-inhibition, and ELISA. These systems provide for the serologic testing of many different animal diseases.

Bacteriology testing is conducted for routine and special requests. These techniques provide for the isolation, identification and sensitivity testing for any one of several microorganisms.

Virology includes various tests to identify viral disease agents. The testing ranges from serum-neutralization tests to direct fluorescent antibody inquiry on sample tissue and cell cultures.

Pathological services include necropsy, histopathology, and parasitology. Clinical pathology is available on a limited basis. These studies combined with the information obtained from history, serology, and virology are the basis for making a diagnosis. The diagnosis, with laboratory findings, is reported to the veterinarian and animal owner who submits specimens to the laboratory.

ANIMAL DISEASE PROGRAMS

January 1, 1988 - December 31, 1988

BRUCELLOSIS

Bovine	
Farm Blood Tests - Herds	5,175
Cattle	38,815
Milk Ring - Herds	8,540
Cattle	333,060
Over-all Infection Rate (cattle)	0%
Calves Vaccinated	67,267
Cattle Blood tests at Livestock Markets	25,485
Samples collected at slaughter	120,366
Porcine Slaughter Swine Tests - Ohio	47,452
Out of State	8,448

TUBERCULOSIS

Tuberculin Tests - Herds (Cattle)	3,207
Number of Cattle	36,614
Herds w/reactors	0
Number of reactors	0

EQUINE INFECTIOUS ANEMIA

EIA tests of Ohio horses	36,541
Number of Ohio horses "Positive"	7
Percent of total tested	.019%
Number of Positive horses destroyed	8

PSEUDORABIES

Swine tested	127,007
Infected herds found	98
Quarantined herds on 12-31-88	132

POULTRY

Pullorum/Typhoid Plate Test (Field)	8,742

LICENSING AND INSPECTION

January 1, 1988 - December 31, 1988

TYPE OF LICENSE ISSUED

Auction Markets	33
Horse Auctions	7
Concentration Yards	79
Slaughtering Establishments	98
Livestock Dealers	163
Weighers	593
Rendering Plants	9
Collectors of Raw Rendering Materials	42
Garbage Feeders	3

INSPECTIONS PERFORMED

Sheep Scabies (head)	89,355
Auction Markets	1,761
Concentration Yards	1,316
Rendering Plant and Raw Rendering Material Collectors	93
Garbage Feeders	37

PERMITS TO IMPORT FEEDER PIGS

Headage	198,012
Permits issued	1,418
Premises Inspected	976

LABORATORY SERVICES UNIT

January 1, 1988 - December 31, 1988

Diagnostic accessions	4,929
Feed analysis	525
Toxicological tests	283
Rabies examinations	84
Tissues examined histologically	4,611
Johne's culture	1,445
Brucella culture	56
Other procedures	11,760
Salmonella (includes avian) culture	20,189
Brucellosis - Cattle	184,666
- Swine	80,321
- Other	4,639
Brucellosis ring tests	43,162
Equine Infectious Anemia	36,541
Pseudorabies tests	127,007
Bluetongue - AGID	7,654
Johne's CF	552
Anaplasmosis tests - Card	2,266
- CF	2,094
Bovine Leukosis tests	4,017
CAE	116
IBR tests	404
PI3 tests	140
BVD tests	165
VS	505
Leptospirosis tests	24,330
FA cases	1,041
FA total tests	3,690
Virus isolation cases	
- (egg inoculation)	44
- (tissue culture)	167
Salmonella pullorum tests	10,031
Salmonella typhimurium tests	20,781
Salmonella gallinarium tests	4,410
Salmonella enteritidis	577
Mycoplasma gallisepticum tests	41,449
Mycoplasma gallisepticum - HI tests	7,444
Mycoplasma synoviae tests	31,296
Mycoplasma synoviae - HI tests	3,763
Mycoplasma melegradis tests	45,472
Newcastle disease virus - HI tests	13,747
Avian Leukosis - ELISA	1,657
Infectious bronchitis - ELISA	6,440
Newcastle disease virus - ELISA	828
Infectious bursal disease - ELISA	1,748
Pasteurella Mult. - ELISA	1,104
Reo virus - ELISA	828
MG - ELISA	91
Mycoplasma synoviae/gallisepticum - ELISA	1,104
Micro Immuno Diffusion tests - Avian	
- Avian Influenza tests	6,529
- Hemorrhagic Enteritis tests	3,455
- Adeno virus	15
- Laryngotracheitis	34
Samples Prepared and Shipped	233

DIVISION OF AMUSEMENT RIDE SAFETY

HISTORY

The Division of Amusement Ride Safety was formed by the 115th General Assembly in 1984 with the passage of House Bill 490. The bill was put into effect on January 1, 1985 with the creation of the Division of Amusement Ride Safety which operates on a full-time basis under the Ohio Department of Agriculture. The Division's laws and rules are set forth in guidelines specified in the Ohio Revised Code under Sections 1711.50 through 1711.99.

The Division currently has 11 inspectors, 2 supervisors, 1 chief inspector, 1 administrative assistant and 1 clerical person. The Division inspects and maintains records on over 1,300 amusement rides at over 900 events and fixed facilities throughout the State. The responsibilities of the Amusement Ride Division are as follows:

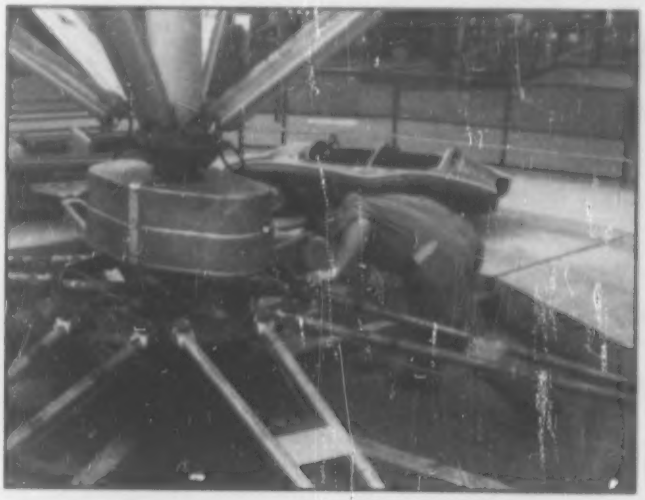
RIDE LICENSING

All amusement operators must have a certificate of insurance on file with the Ohio Department of Agriculture's Division of Amusement Ride Safety, stating that the company meets all insurance requirements set forth by state law. Each ride must also have a permanent brass numbered I.D. plate provided by the Ohio Department of Agriculture. The I.D. plate, affixed to the ride equipment, serves as a permanent license number for that ride, making it easier for the Department to track the ride from owner to owner, and follow maintenance and modification records. An inspector must verify each ride's I.D. plate before inspecting the ride.

There are two different types of inspections done by the Division of Amusement Ride Safety. The initial inspection and the re-inspection. In an initial inspection, all rides must meet the requirements established by both the Department of Agriculture and the manufacturers of the ride. The inspectors verify the safety of every amusement ride in the state. If any problem is found on the ride, and that problem cannot be corrected while the inspector is on site, the ride will not be licensed, no will it receive a validation sticker which must be attached to all brass I.D. plates before the ride can operate. The ride will only be allowed to run when all problems, big or small, are corrected.

The second type of inspection is the re-inspection. A re-inspection can occur throughout the year at either the ride company's request, at the request of an event sponsor, or when a periodic inspection is assigned by the Chief Ride Inspector. If a problem is found with a ride during a re-inspection, every effort is made to work with the owner of the ride to make all corrections while the inspector is on site - so the ride will not have to be closed. If the ride problem cannot be solved in a timely manner, and the ride is determined to cause a safety hazard to the riding public, the inspector will issue a "stop operation order", and tie a red tag to the controls of the ride. The ride cannot operate until the ride passes another re-inspection.

The following areas are covered in every ride inspection: structural integrity, electrical safety, hydraulic systems, brakes, tubs and sweeps, the ride's operation, and proper warning signs and rules.



In addition, the State of Ohio requires that all ride owners keep accurate maintenance logs on a year round basis. The inspectors must verify the maintenance logs of each ride while on the inspection site to ensure that the manufacturer's safety modifications and general upkeep of the ride are being carried out.

When any problems are found with the ride, the inspector issues a safety order which mandates that the repairs listed must be made by the stated date on the order. After making the repairs, the ride owner will send a signed copy of the inspection report to the Ohio Department of Agriculture which is kept on file under the ride company,s name.

TRAINING

There are over 700 rides built by more than 150 manufacturers that our inspectors must be familiar with in order to effectively carry out the inspections. The inspectors receive 80 hours of formal classroom training in the fall and winter of each year to upgrade their expertise in the ever-changing ride industry. Each inspector must

have a thorough understanding of electrical and hydraulic systems, preventative maintenance, lubrication and mechanical components.

In addition, our inspectors work to upgrade their amusement ride training manual put together by the Division to outline inspection guidelines. These guidelines are based on manufacturer's recommendations and procedures that were developed by other regulatory authorities in cooperation with our own division.

The ride inspectors also make use of the winter months by making field visits to every ride company based in Ohio to discuss maintenance procedures and safety bulletins. In the name of safety, the Department strives to promote a good working relationship between the Division inspectors and the people who work in the amusement ride industry.

GAMES/NOVELTIES/SIDE SHOWS

The Ohio Department of Agriculture's Division of Amusement Ride Safety is also responsible licensing and regulating all games, novelty stands and side shows at the 95 county and independent fairs, as well as, the Ohio State Fair. The inspectors try to ensure that the games are fairly operated, that the novelty stands don't sell prohibited items and the side shows are not misrepresenting.

PROGRAMS

The Division sponsored a Ride Safety Seminar, as well as, a Waterparks and Go Cart facilities seminar. These seminars were attended by a total of 120 individuals who either own and/or operate rides in the State of Ohio. All seminars covered the ride law and rules, guidelines to establish an effective maintenance program and a roundtable discussion on maintenance and safety training.

Ohio also hosted the National Association of Amusement Ride Safety Officials (NAARSO) Annual Safety Forum.

NAARSO was developed specifically to serve the needs of government agencies and their employees involved in amusement ride safety.

This newly established Association is in its second year, and has 150 members throughout the United States and Canada. At present, there are 20 states represented out of 27 states that have a ride safety program.

The week long Forum included classroom sessions and field inspections on various types of rides. The Forum concluded with a field trip to Cedar Point. At Cedar Point training included: nondestructive testing, winter overhaul/maintenance procedures, training and operations procedures.

1988 INSPECTION REPORT

Total Number of Parks & Events	919
Total Number of Parks and Events Inspected	650
Total Number of Rides Licensed	1,331
Total Number of Portable Ride Companies	99
Total Number of Permanent Parks	12
Total Number of Go Cart Facilities	23
Total Number of Water Attractions	25
Total Number of Accidents per Definition Reported	4
Total Number of Game Licenses Sold	1,294
Total Number of Novelty Licenses Sold	296

REVENUE:

Ride Licenses	$43,765.00
Inspection Fees	$60,200.00
Game Licenses	$38,820.00
Novelties & Sales	$ 8,880.00

OFFICE OF FAIRS

It is the responsibility of this Section to assist and regulate the 95 County and Independent Fairs in Ohio.

The department has the responsibility of administering the laws and rules of this office and the State of Ohio. We are asked to deal with numerous situations and interpretations of the "Red Book".

We will be monitoring the new audit program put into effect on December 1, 1988, and the auditing of Ohio's fairs every two years. With this new program, all fairs in Ohio will be under the same accounting system.

This section audits all the Annual Reports of the fairs and releases county financial aid certificates and the issuing of checks from the Ohio Fairs Fund for the coming year. This fund was at an all time high this year of almost three million dollars.

The Administrative Coordinator of this section also represents the Director, when necessary, at Ohio's 87 County Fairs and 8 Independent Fairs.

DIVISION OF CRIMINAL INVESTIGATIONS

This Division of fifteen employees conducts investigations of complaints and alleged violations of State and Federal laws and regulations for administrative and/or criminal or other legal action.

Responsibilities are collecting and preserving evidence, interviewing involved parties, examining and scrutinizing records, formulating and presenting evidence to prosecuting authorities and testimony in court and/or administrative hearings to secure prosecution and compliance with Ohio and Federal Laws applicable to those programs governed and/or administered by ODA.

Five investigators are assigned full time to the Food Stamp Fraud Unit, one to the Pesticide Enforcement Section and three to the enforcement of the State/Federal Meat Inspection Act. The remaining investigators are assigned to cover the balance of the divisions of ODA.

The coordination of ODA's Natural Disaster and Nuclear accident response team falls under this Division.

The Food Stamp Trafficking Unit (FSTU) - This unit was formed based on a contract between the United States Department of Agriculture's Food Nutrition Service, the Ohio Department of Human Services (ODHS), and ODA. Based upon this contract, the FSTU is the only statewide enforcement unit for food stamp fraud and trafficking. Since its implementation in 1984, FSTU has consisted of one criminal investigation supervisor, four criminal investigators, and one administrative secretary under the direction of the Division Chief.

The majority of the referrals for investigation have come at the request of Federal, State, County and Municipal agencies. FSTU personnel have gained an expertise in the field of food stamp investigations and are duly respected by law enforcement departments.

The Ohio FSTU Program has been touted by the USDA to other states and presently, the State of Illinois is using our program as a guide in the creation of new enforcement unit.

The Compliance and Evaluation Section (C&E) - This section consists of a criminal investigation supervisor, four criminal investigators, two investigators (added 12/88) and one secretary.

The C&E staff started 1988 with 229 pending complaints: 250 new complaints were logged and 289 completed for a net reduction of 39 pending complaints over 1987.

During 1988, 43 complaints were handled as full-case investigations and resulted in 27 prosecutions. Some of the cases were resolved with warning letters or notices of violation, while some involved personnel and resulted in resignation or other disciplinary action.

A total of 80 warning letters or notices of violation were issued in 1988 to firms that did not warrant prosecution, primarily because of a first offense and a voluntary compliance aim taken by C & E.

The C&E staff executed 37 embargoes involving 232,719 pounds of food items, mostly meat and poultry that was either adulterated or misbranded. This was as the result of 854 reviews. In addition, 29 Evaluation Incident Reports were generated to the Meat Inspection Division concerning minor infractions of the Meat Inspection Regulations.

REYNOLDSBURG LABORATORY

The Reynoldsburg Laboratories, a 15 building complex located east of Reynoldsburg on Route 40, provides laboratory and maintenance support services to all divisional units of the Department.

In 1988, the Department purchased a 110 acre farm adjacent to the south end of the existing 68 acre complex. Specific plans for the use of the newly acquired acres has yet to be decided.

A variety of tours are routinely conducted each year through the complex. Tour groups range from elementary school children to college students and special interest groups.

DIVISION OF FOODS, DAIRIES & DRUGS

The Division of Foods, Dairies and Drugs is delegated the responsibility of securing compliance with the laws that are designed to safeguard the public against uncleanliness, unhealthfulness, adulteration, false advertising, illegal labeling and fraud incidental to the preparation, handling, packaging, storage, transportation, refrigeration, spoilage and other hazards connected with the merchandising of foods, dairy products, beverages and drugs. All related consumer complaints are handled by this agency.

Other functions include grading fresh fruits and vegetables, poultry and poultry products to provide a certified guarantee of quality for such products.

Fresh Fruit and Vegetable Inspection - To maintain the quality of produce sold in Ohio, the Division has a cooperative agreement with USDA to provide grading and inspection service. Commercial inspections for grade and/or condition of fresh fruits and vegetables provide the basis for orderly marketing of produce. Most of the state and federal institutions utilize these inspectors to insure the quality and condition of produce being delivered. During the harvest season, additional graders are hired for grading of tomatoes, pickles, onions, and potatoes. Inspections take place at commercial establishments, institutions, and shipping points.

Poultry Grading - Poultry grading is another federal/state cooperative program where state personnel grade for the USDA. Grading is a marketing service that establishes various levels of quality characteristics on poultry products. Grade factors enable the industry to have specific parameters for various quality factors and help the consumer more readily identify products, such as shell eggs, poultry, poultry products, and rabbits. There is also a Hatchery Surveillance Program and an Egg Surveillance Program to protect both consumers and producers.

ANNUAL REPORT STATISTICS
January 1, 1988 - December 31, 1988

	LICENSES	DEPOSITS
Bakeries	5,243	$ 79,625.00
Frozen Food Establishments	2,600	65,025.00
Canneries	108	5,400.00
Soft Drinks	196	19,600.00
Syrup and Extracts	63	3,150.00
Cold Storage Warehouses	35	3,500.00
Dairy Plants (Dealer's)	70	4,117.50
Temporary Weigher, Sampler, Tester	226	618.00
Weigher, Sampler, Tester	894	4,640.00
Frozen Dessert Establishments	1,347	53,426.25
TOTAL	10,782	$239,101.75

DIVISION OF MARKETING & COMMUNICATIONS

The Division of Marketing and Communications serves as a link between ODA's divisions, the consuming public and our agricultural constituents. One of its jobs is to foster (maintain) a favorable image of Ohio agriculture in the public eye. Information is channeled through this office for use by the media, state legislators and other interested parties. Special projects and other promotional efforts are conducted to better inform and educate the public about agriculture in Ohio.

In addition, the Division is responsible for marketing Ohio's agricultural products both here and abroad. We work to promote fresh and processed goods to foreign countries as well as Ohio consumers. These services include but are not limited to: grading, inspection, and market intelligence with regards to Ohio's position in the world market place.

The Division works closely with commodity groups established under the Ohio Revised Code to develop new markets and provide production research. These groups include: the Ohio Nursery Stock Marketing Program, Ohio Grape Marketing Program, Ohio Apple Marketing Program, Ohio Corn Marketing Program, Ohio Beef Marketing Program, Ohio Egg Marketing Program and the Ohio Turkey Marketing Program, as well as other commodity groups like the Ohio Pork Producers Assn., and the Ohio Soybean Assn.

Funding for commodity development projects is generally from self-imposed producer assessments. The Grape Industries Program, however, receives its monies from a three percent gallon tax on wines sold in Ohio.

In a unique joint effort, two ODA employees are managed by the Ohio Department of Development's International Trade Division (ITD) to bring agricultural contacts and expertise into sharper focus with ITD's export promotions. The Agri-Export Assistance Program is major part of these efforts. The program's goal is to assist the entrance of small to medium-size firms into the export market.

1988 OVERVIEW
Marketing and Communications

During 1988, ODA faced many challenges along with Ohio's farmers. Foremost among them was last summer's drought. The Drought of '88 affected everyone, and we strove to convey the latest news on agriculture to the media while assisting our farmers.

Throughout the year, ODA was involved in many other activities besides the "Drought Story." The highlights are as follows:

* The hard work of Ohio's Agricultural Societies and fair board members was recognized by ODA at the Ohio Fair Manager's Convention in January. These individuals are responsible for the success of our 96 county and independent fairs which make Ohio the outstanding fair state in the nation.

* Ohio soybean producers voted on and defeated a proposal which called for a 1 cent-per-bushel assessment to fund promotion, education and research. It was the sixth time such a referendum was conducted.

* ODA and other agricultural groups hosted a reception in the State House rotunda for legislators in honor of Ohio Agriculture Week on March 15. Samples of Ohio foods were served to over 150 Senators and Representatives, to remind them that agriculture is the State's Number One Industry.

* Director Steve Maurer journeyed to India and the People's Republic of China on trade missions to promote Ohio's agricultural industry and technology. Maurer's primary goal was to evaluate opportunties for the entrance of Ohio agribusiness firms into these countries, and to encourage joint ventures in agricultural research and technology.

* In May the Department announced plans for a comprehensive marketing program to increase the in-state usage of locally-grown fruits and vegetables. Initiatives included a toll-free fruit & vegetable hotline to help link producers and buyers, and a detailed survey to determine the exact areas and volume of produce, as well as availability.

* During the extremely hot, dry month of June, the drought began in earnest. ODA coordinated the arrival of over 120,000 bales of hay from compassionate farmers in states as far away as Vermont and Maryland. In most cases it was return efforts by farmers who remembered the saving bales which came from Ohio in 1986.

* ODA was a sponsor of the first "Buy Ohio Food Week," along with the Ohio Grocer's Assn., the Dept. of Development and the Ohio Food Processor's Assn. This event was aimed at promoting Ohio grown and processed foods which are available at retail grocery stores and roadside markets. Ohio consumers are often willing to purchase Ohio products over others if they recognize them; the food week is an excellent way to make them more aware of these buying opportunities.

* Director Maurer attended the meeting of the Midwestern Association of State Departments of Agriculture (MASDA) in St. Louis in July. It was decided that Ohio will be the proud host of the 1989 MASDA meeting, to be held in Cincinnati.

* The drought burned on and ODA took further steps to help our suffering farmers. We joined with other agricultural organizations to provide practical information and aid to farmers. Marketing and Communications coordinated a program which raised money to buy feed for hungry animals, called "Adopt-A-Sow or Cow." Public response was excellent, and over $6,000.00 was netted. Hay, alfalfa pellets and feed corn were purchased and distributed to needy farmers around the state.

* The Ohio State Fair provided an outstanding opportunity for fair-goers to sample quality Ohio foods, when ODA hosted a series of cooking demonstrations. Expert chefs from around the state whipped up real "Heartland Cuisine" using Ohio products. Hundreds of recipe books

were distributed, proving that Ohioans have an interest in selecting the best—ie. cooking with Ohio foods.

* In September, ODA announced that we would be conducting a referendum for Ohio's corn producers on a similar proposal to the check-off programs already in place for beef, milk, nursery stock and other agricultural industries. This program would assess producers 1/2 cent per bushel to be used for promotion, research and education. (NOTE—it was announced on Jan. 13, 1989 that this referendum passed by over 700 votes)

* At the annual meeting in September of the National Association of State Departments of Agriculture (NASDA), Director Maurer was elected President. He was also appointed President of the Mid-America International Agri-Trade Council (MIATCO), which has given us much assistance in promoting Ohio products overseas.

* ODA was a sponsor of the 29th Ohio Roadside Marketing Conference, held in Dayton late in the year. Next year Ohio will hold the 5th Annual National Direct Marketing Conference in Toledo. Hundreds of roadside market owners from around the U.S. are expected to attend this prestigious event.

* Ohio wines produced by Meijer's Wine Cellar debuted in Taiwan's largest supermarket in November. The international sale was made possible through ODA's and the Department of Development's Ohio Agri-Export Assistance Program.

ON-GOING MARKETING & COMMUNICATIONS ACTIVITIES

Market News - The Division of Markets has two distinct programs, one for livestock, and one for grain market news. In the livestock program, 15 companies are contacted daily to determine Ohio direct hog prices. Other livestock information includes U.S. major terminal markets and direct country markets, beef markets (both live and dressed trade), sheep markets, feeder calf and feeder pig markets.

Ohio cash grain markets are reported daily, as well as future prices, Toledo and Cincinnati terminal prices, and basis prices along with trends and changes in prices. This is the most comprehensive Ohio grain market information available in the state. The major wire services, newspapers, and radio stations utilize the Market News Service. Virtually all those involved in buying or selling grain, livestock, poultry, and poultry products use the service. In addition, insurance companies, investment companies and other government agencies use ODA as their source of market information.

URBAN CONSUMER AFFAIRS

This office represents the Ohio Department of Agriculture to northern Ohio's urban residents. The goal being to help the consumer increase their awareness of food and commodity purchases and provide a mode whereby a complaint can be registered if one feels they have been short weighted, sold an unwholesome product or a product has been mislabeled. This function is provided through group presentations, seminars and the news media.

In fiscal 1988, the Consumer Affairs Office served and/or represented the Department on the following committees or boards:

- Greater Cleveland Interchurch Council, Hunger Task Force Commission
- Future Farmer of America, (FFA) Greater Cleveland Branch
- Greater Cleveland Foodbank and participated in the 1988 Annual Foodbank Fair
- "Fresher from Ohio" - Ohio Cooperative Ext. Service
- Lorain County Ag and Natural Resource Council
- Kinsman Area Council Nutritional Committee

In 1988, this office responded to the following request for consumer information and/or referrals:

* Referrals to Cuyahoga County Extension Service - 68
* Complaints forwarded to the local and/or Columbus office of the Attorney General - 22
* Consumer complaints referred to ODA's toll-free number (1-800-282-1955) - 50
* Responded to the request for food related pamphlets, state maps, fair schedules and job applications - 75
* Referrals to ODA's Reynoldsburg Laboratory - 22
* Referrals to Ohio Agriculture Research and Development Center (OARDC), Wooster - 9

DIVISION OF MEAT INSPECTION

The Division of Meat Inspection is responsible for administering the Ohio Meat and Poultry Inspection Laws in such a manner as to conform to provisions of the Wholesome Meat Act and the Federal Poultry Inspection Act passed by Congress in 1967. The Ohio program, as those of other states, is subject to review by the Federal Meat Inspection Service and must be certified as "EQUAL TO" federal inspection.

The Division operates its field program through 13 geographical districts, each district being supervised by a veterinarian and one or more program supervisors. Overall supervision of the program is provided by the Division Chief and Assistant Chief with the support from the technical staff headquartered at 8995 East Main Street, Reynoldsburg.

The objective of the Meat Inspection Program is to assure that meat and poultry products are processed under sanitary conditions, are wholesome, unadulterated and properly labeled. To accomplish this, inspection is accomplished in the following steps:

1. ***Approval of Plant Facilities and Sanitation*** - Each establishment must provide a safe water supply, adequate sewage disposal system, properly installed plumbing and drainage system and such other facilities and procedures as are necessary to maintain sanitary conditions within the establishment and to allow the production of wholesome products.

2. ***Antemortem and Inspection*** - Each animal/bird slaughtered for human consumption is examined by division inspectors before slaughter, and its carcass is examined at the time of slaughter and dressing to determine that it is wholesome and free of contamination. Animals and carcasses found to be diseased are handled under veterinary supervision to assure that all meats and poultry which are diseased or otherwise unwholesome are disposed of in a manner that precludes their entering the public food supply.

3. ***Reinspection*** - Products passing postmortem inspection are subject to reinspection at every stage of handling to assure that only wholesome products, properly identified with an Ohio inspection legend leaves the establishment.

4. ***Preparation*** - Industry is required to exercise controls during the preparation of processed products to assure that only wholesome ingredients are used and that added substances are approved and used only in allowable quantities. Processes must be adequate to eliminate the trichinae hazard, if pork is an ingredient of a product which is to be eaten without further cooking. The establishment is required to follow written formulas and processing procedures.

5. ***Labels*** - Labels to be used on processed products must be submitted to the division for advance approval. These labels on consumer packages must bear the Ohio inspection legend. This is the consumer's assurance that the product was wholesome, unadulterated and properly labeled when leaving the establishment.

The Division of Meat Inspection completed and received Federal authorization to implement the new State Performance Plan (SPP) in 1988. This plan includes the implementation of a Federally required Plant Review and Enforcement Program. The purpose of this program is to assure inspection activities are conducted in accordance with USDA requirements. This program also includes the monitoring of plants which are exempt from ante-mortem and post mortem inspection requirements. The program utilizes an enforcement system that detects violations, investigates and enforces State meat and poultry laws. Enforcement includes all activities to correct deficiencies in and out of plants.

The Division of Meat Inspection also participates in "Specialty Programs". The Meat Inspection Program is require to have an adequate residue monitoring and control program; PFF program; species determination; ect. These programs may be addressed through participation in current USDA programs or by developing and conducting our own specialty programs that are at least equal to USDA requirements.

DIVISION OF PLANT INDUSTRY

The Division of Plant Industry is a multifaceted division comprised of seven sections, each responsible for the enforcement of Ohio laws—all having a biological basis. The purpose of these laws is to provide economic protection to the producer and the consumer.

APIARY SECTION

The purpose of the Ohio Apiary Inspection Program is to diagnose diseases affecting the honey bees and prescribe appropriate controls. This is accomplished by the annual registration of apiaries by beekeepers and the inspection of these apiaries by state apiary inspectors supervising and assisting county appointed inspectors.

Over 8,000 beekeepers registered their apiaries for 1988. During the entire year a statewide quarantine was imposed prohibiting all colony movement. Extensive apiary inspections were conducted to diagnose Varroa mite infestations.

Inspection results found 11 Ohio counties with mite infestations (Adams, Allen, Auglaize, Brown, Clermont, Defiance, Hancock, Henry, Logan, Paulding, Putnam). The necessary mite controls were prescribed for bees to be administered by the beekeepers.

APICULTURE PROGRAM

Total Bee Colonies Inspected	54,963
Total Apiary Locations Inspected	8,647
Interstate Movement Inspections (colonies)	2,273
American foulbrood diseased colonies diagnosed	820
European foulbrood diseased colonies diagnosed	264
Chalkbrood diseased colonies diagnosed	673
Disease samples taken for diagnosis	701
Registration certificates issued	8,057
County appointments approved	85
Consumer beekeeper requests	672

CERTIFICATES AND PERMITS ISSUED

Certificate of Health (out of state movement)	7
Permit of entry into Ohio	4
Quarantine apiary movement	44
Queen rearing certificate	2
Transfer ownership permit	102

FEED AND FERTILIZER SECTION

This section administers Ohio's Commercial Feed Law, Fertilizer Law, Agricultural Liming Materials Law, Agricultural Additive Law, and Anhydrous Ammonia Regulations. Feed and liming material manufacturers and distributors are licensed annually by calendar year. Fertilizer licenses and specialty fertilizer registrations are issued by fiscal year (July/June). A $5 license fee is charged for feed and fertilizer licenses. A liming material license is $50. Registration of specialty fertilizer (lawn and garden) is $50 per grade. Additive registration is $50 per product per year.

With the exception of the Agricultural Additive Law, all of the other laws provide for an inspection fee. The inspection fee is 10 cents per ton for feed, 12 cents per ton for fertilizer, and 1/4 of one cent for each ton of liming material in excess of 2,500 tons.

In 1988, there were 1,066 firms licensed to manufacture or distribute commercial feeds, 92 firms to distribute liming materials, and 656 firms to manufacture or distribute commercial fertilizers. Registrations were issued for 1,688 specialty fertilizer products and two agricultural additives.

The office staff is responsible for issuing licenses, registering products, and processing inspection fee reports. Product analysis bulletins and fertilizer tonnage sales reports are prepared semiannually. The liming tonnage report is prepared annually. These reports are distributed to the county agents and depending on availability, may be requested by contacting the Feed and Fertilizer Section.

FEED AND FERTILIZER LABORATORY

The agricultural chemical laboratory analyzes animal feeds, fertilizers, liming materials, pesticides and samples. These analyses are to insure the proper labeling of consumer and speciality products. Feeds are checked for protein, drugs, minerals, vitamins, trace elements and adulterate.

Fertilizers are being tested for nitrogen, phosphorus, potassium and trace elements. Calcium, magnesium, total neutralizing power, and screen analyses are performed on agricultural liming materials. Custom mix samples are being implemented for assays.

FEED PROGRAM

Licenses Issued	1,066
Tonnage Processed	1,493 (1,804,305 tons)
Inspections	1,896
Samples Collected	1,765
Samples Reported	1,757
Samples Out of Tolerance	373
FDA Medicated Feed Inspections	68

FERTILIZER PROGRAM

Licenses Issued	656
Registrations Issued	1,688
Tonnage Processed	800 (2,111,719 tons)
Inspections	1,842
Samples Collected	1,411
Samples Reported	2,039
Samples Out of Tolerance	372
Anhydrous Ammonia Inspections	299

LIMING MATERIAL PROGRAM

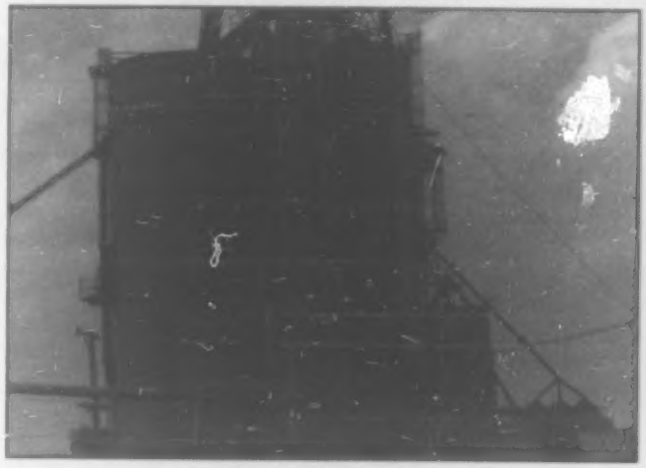
Licenses Issued	92
Tonnage Processed	52 (1,371,933 tons)
Inspections	168
Samples Collected	117
Samples Reported	148
Samples Out of Tolerance	42

GRAIN WAREHOUSE SECTION

The Division of Grain Warehouse licenses and regulates agricultural commodity handlers (grain elevators) in Ohio and administers a $5.9 million Indemnity Fund, which reimburses farmers when a licensed elevator becomes insolvent.

As a part of the regulation, all licensed handlers are examined at least once a year and those in weaker financial condition are examined more frequently. The Section had seven warehouse examiners at the end of the year. During an examination all grain records of the licensee are thoroughly checked and grain inventory is measured to determine if all stored or warehouse receipted grain is in the elevator; financial information is also obtained to determine ability to pay for delayed price grain and grain payables.

The Indemnity Fund was funded by a 1/2 cent per bushel assessment on grain marketed at licensed elevators in Ohio. The assessment is only collected if the Indemnity Fund levels drop below $4 million. To date, the fund has reimbursed farmers over $2.5 million for commodities they have forfeited in elevator insolvencies. Last year 32 farmers were reimbursed as a result of the insolvency of two licensed facilities owned by the same person.



Legislation establishing the Indemnity Fund and stricter regulatory requirements for grain elevators became effective July 1, 1983. This legislation gave ODA more authority to control industry in an effort to protect farmers through the regulation and licensing of agricultural commodity handlers. Before this legislation, between 1968 to 1983, approximately $9 million was lost by farmers in grain elevator insolvencies.

The ODA will be entering its' third year of a cooperative examination agreement with USDA, Commodity Credit Corporation, to perform examinations of licensees with Uniform Grain Storage Agreements with CCC. This cooperative agreement has eliminated duplicate examinations by ODA and USDA examiners. USDA officials rate the performance of ODA's Grain Warehouse Section under this agreement as among the best of their cooperative states.

The Grain Warehouse Section is striving to improve its' regulatory program by hiring qualified people and conducting rigorous examiner training programs.

A seven member Commodity Advisory Commission advises and counsels the Director of Agriculture and the Grain Warehouse Section in the administration of the Ohio Grain Warehouse law, including the approval of claims paid from the Indemnity Fund. The present Commission members are: Joe Whitney, Chairman, Auglaize County; Gene Beaston, Wyandot County; Jeffrey Danford, Licking County; Meriam Hare, Clinton County; William Koon, II, Allen County; Floyd Sisinger, Van Wert County;. One position is open at this time.

Comparative Summary of Grain Warehouse Receipts & Examinations

	1988	1987	1986	1985
Commodity Handler License Fees	$252,908.49	$145,749.94	$171,395.78	$180.148.12
Number of Handler Licenses Issued	663	711	707	705
Interest Earned on Indemnity Fund	$426,903.59	$426,245.71	$548,698.85	$320,948.12
Interest Utilized for Operational Use	$214,666.00	$139,521.00	$70,000.00	- 0 -
Balance in Treasurer's Account 498	$5,973,220.31	$5,851,633.29	$5,660,742.94	$3,976,869.13
Claims Against Indemnity Fund	32	55	105	84
Total Amount Paid in Claims	$206,879.30	$125,143.39	$289,477.66	$204,892.67
Monies Recovered to Indemnity Fund	$15,550.00	$22,420.08	$20,751.82	- 0 -
Number of Warehouse Examiners	9.4 (avg)	10	9	9
Number/Warehouse Examinations Completed	778	586	735	658
Violation Notices Issued	274	209	71	48

PESTICIDE REGULATION SECTION

The certification of private and commercial applicators under Ohio's plan, approved by the United States Environmental Protection Agency, is still in effect. Certification is required of all applicators if they are to use those pesticides, that have either state or federal restricted uses. Certification requires training and passing a written examination on certain categories of pesticide application. Certification is a method of determining that a person is competent in using pesticides.

Since the certification program was initiated, approximately 40,000 private applicators (growers of an agricultural commodity) have attended pesticide training sessions conducted by the Ohio State University's Cooperative Extension Service and the ODA. This year 1,592 persons have been certified for the first time as private applicators to use restricted-use pesticides. Since 1977 a total of about 29,706 persons have been certified as private applicators in Ohio with 17,830 still certified to use "Restricted Use" pesticides.

Four regional commercial-private pesticide applicator recertification training sessions were held by the Cooperative Extension Service, and ODA during December for the required recertification. Certification is only valid for three years and must be renewed. Two sessions were also held in February for new commercial applicants who wished to become licensed. A total of 2,731 persons attended the December sessions and 690 at the February sessions. Ohio had 7,526 commercial pesticide applicators certified and licensed during 1988. Examinations were provided to 6,547 new commercial applicators with an average of 3 examinations per person, 19,641 examinations were taken.

Pesticide products, which include sanitizers, germicides, insecticides, fungicides, and herbicides, are required to be registered if they are to be distributed in the State. During late winter and early spring, the field staff concentrated on visiting pesticide distributors and dealers who stock these products to assure that the products were registered and properly displayed to avoid contamination of the environment and food products. Products were randomly sampled for laboratory analysis to assure that they met labeled claims for active ingredients.

The annual pesticide product registration was completed with 1,234 companies registering 10,590 pesticide products for sale in Ohio. This is an increase of 668 products registered from the previous year. In 1988, 31 "Stop Sales" were placed on pesticide products and three "Stop Sale and Recalls" were placed on pesticide products for being deficient or over formulated or non-registered with this Section.

During this period, six special "Section 18", or emergency use exemptions for specific pesticides were requested from and approved by U.S.E.P.A., with one withdrawn as need no longer existed. The specific uses of selected pesticides were issued for use on lettuce, onions, wheat, pea beans, soybeans and blueberries.

Eleven requests for "Special Local Need" pesticide registrations were reviewed with nine being issued and two refused on the lack of need.

This Section issued 70 "Notices of Warning" to pesticide applicators and dealers for various violations of the Ohio Pesticide Law and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). This Section has primary authority from the U.S.E.P.A. to also enforce the federal pesticide act.

With a special grant from the U.S.E.P.A., 147 water wells located at agricultural and chemical facilities were sampled for pesticide contamination, of the 11 positive wells, 8 of them had multiple pesticide detections.

PLANT PEST CONTROL SECTION

A total of 1,208 nurseries were inspected in 1988, comprising 15,264 acres overall. Both figures are up over 1987. A little more than 3,350 nursery dealers were licensed and inspected in 1988.

The top twenty insects and diseases reported during 1988 are as follows:

DISEASES	INSECTS
Apple Scab	Aphids, Unk. Spp.
Powdery Mildew	Pine Bark Adelgid
Grown Gall	Bagworm
Septoria Leaf Spot	Twospotted Spider Mite
Lophodermium Needlecast	Spruce Spider Mite
Fireblight	Japanese Beetle
Juniper Twig Blight	Pine Needle Scale
Phyllosticta Leaf Spot	Fletcher Scale
Anthraconose Blight	Cooley Sprucegall Adelgid
Cedar-Hawthorn Rust	Black Vine Weevil
Cedar-Apple Rust	Birch Leafminer
White Pine Root Decline	Leafhoppers, Unk. Spp.
Bacterial Leaf Spot	Eastern Sprucegall Adelgid
Iris Leaf Spot	Spiny Witch-Hazel Gall Aphid
Coleosporium Needle Rust	Honeylocust Plant Bug
Botrytis Blight	Bronze Birch Borer
Pyracanta Scab	Yellow-Poplar Weevil
Septoria Stem Canker	Oystershell Scale
Phytophthora Dieback	Hawthorn Lace Bug
Blackknot	Mimosa Webworm

A second mild winter in a row created severe bagworm problems in central and southern Ohio nurseries. Yellow-poplar weevil invaded the state again in 1988, but damage to magnolia and tulip trees was not as bad as 1987.

The two-spotted mite exploded on deciduous hosts and developed into a major problem on soybeans. On the other hand, the spruce spider mite all but disappeared.

The great drought of '88 will undoubtedly have a residual effect well into 1989. Depending upon the severity of this winter, we are anticipating numerous problems during spring dealer work.

As part of the Ohio Cooperative Plant Pest Survey, three western Ohio nurseries participated in a new IPM project. Each of the nurseries employed their own personnel to conduct the scouting and to monitor pheromone traps. The results were mixed, but at least one of the nurseries reported a reduced use of pesticide and more timely applications.

It was reported in 1987 that Rose Rosette disease had been found in southwestern Ohio for the first time. In 1988, the disease was detected in 3 new southwestern counties, Adams, Brown, and Clermont. These are believed to be all first-year infections.

GYPSY MOTH PROGRAM

Approximately 16,000 pheromone traps were placed throughout Ohio's 88 counties by state and federal personnel. Emphasis was given to those counties and sites with a high people population, heavy forest cover, and/or a significant volume of interstate traffic. Additional trapping was conducted in and round isolated areas where male moths were detected the previous season for purposes of further identifying and defining potential infestations. In eight counties, the milk-carton trap was used in lieu of the delta trap.

A total of 72,300 male moths were trapped statewide. This represents a 59% increase over 1987. Ashtabula county in the NE corner of Ohio accounted for 30,600 of these moths. No defoliation is evident as yet, but egg masses can be found in those sites with prime hosts and even some without.

In Allen county (near Lima, Ohio) an isolated infestation was detected in 1985. The site was set aside for experimentation utilizing the F, sterile insect technique. Releases of sterile eggs were made in 1986 and 1987, and monitored with pheromone traps in 1987 and 1988. Male moth catches at the site this season totaled 32. Further ground inspections of the site turned up 4 to 5 new egg masses. The results are still being evaluated; however, it is likely that the experiment will be terminated with an insecticide application in 1989.

In January of 1987, a state Gypsy Moth quarantine was enacted to protect non-infested parts of Ohio and other states from artificial introductions of this pest. On March 1, 1989, the areas under regulation within Ohio will be expanded to include all of one county and parts of three others in NE Ohio. This addition takes in a fairly large number of sawmills and wholesale nurseries, some of

which are situated in close proximity to Gypsy Moth egg masses. Articles regulated are the same as those in the federal Gypsy Moth quarantine, except for the addition to cut Christmas trees. The are itself, however, is considered "low risk" under the federal quarantine, awaiting proposed changes in that document. Shipments of regulated articles from the regulated area should be accompanied by special Ohio Gypsy Moth certification after March 1, 1989.

GYPSY MOTH MANAGEMENT COUNCIL

At the most recent meeting of the Council in November of 1988, a state policy document was finally adopted after several drafts and much debate. The document sets forth general guidelines for the planning, funding, implementation, and evaluation of various Gypsy Moth related activities in Ohio. Copies of the document are available through the Council officers or any of its members.

Nursery Inspection Certificates Issued	1,415
Nursery Dealers Certificates Issued	3,332
Hardy Bulb Dealer Certificates Issued	106
Nursery Agents Certificates Issued	53

NURSERY INSPECTIONS

Initial Inspections of Nursery Year	1,733
Recall Inspections	375
Storage Inspections	24
Strawberry/Raspberry Inspections	23
Restrictions	39
Dealer Inspections	2,665
Stop Sales	886
Seizures	21
Rejection Notices	106

SPECIAL INSPECTIONS

Inspection of plant material for homeowners moving to other states	63
Export Certificates of Nursery Stock and other agricultural commodities	873
Post-Entry Quarantine Inspections	48
Investigations	1,631
Prosecutions	2
Pest Diagnosis	608

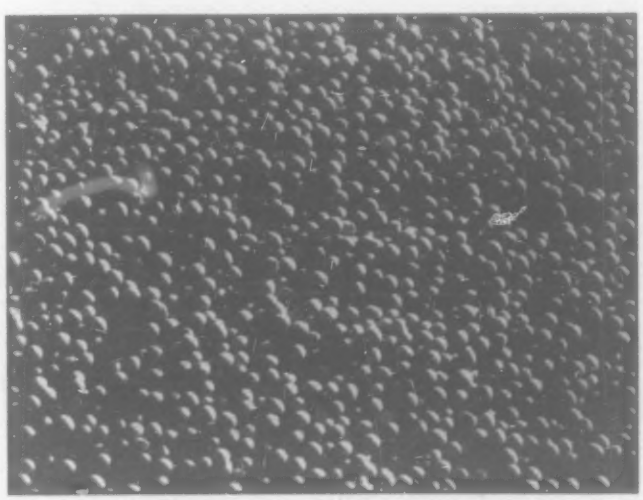
Export of raw or unprocessed agricultural commodities must be certified free of injurious insects, diseases, and other pests such as weed seeds, nematodes, snails, etc., in order to protect the importing country's agricultural industry. The inspection and certification of Ohio products for the export market is conducted largely by the Plant Pest Control inspection force. Some grain is also inspected by the Lake ports by federal inspectors.

SEED SECTION

1988 began with the annual inspectors' meeting during which time the two regular and eight temporary seed inspectors were assigned territories and briefed on current activities. These people are instructed to look for mislabeled seed and non-registered seedsmen. The following table shows that 5,093 visits were made to wholesale and retail outlets and that 2,575 samples were sent to the laboratory. As a result, 315 violation notices were issued. In addition, 1,439 service samples were tested for farmers and the Department of Transportation.

SEED PROGRAM

Seed Labelers Permits Issued	385
Packet Vegetable Seed Fees	$34,670.46
Seed Tags Issued	2,810
Seed Tonnage Fees	$112,559.80
Inoculant License Issued	7
Applicator's Licenses Issued	134
Income—Laboratory Services	$3,373.00
Total Income	$155,957.86
Inspections	5,093
Samples Taken	4,014
Samples Analyzed	3,488
Stop Sales	72
Relabel	243



DIVISION OF WEIGHTS & MEASURES

In Ohio, the Director of Agriculture is the State Sealer of Weights and Measures. A Deputy Sealer (Chief of the Division of Weights and Measures) is appointed by the Director and is responsible to the Director for the administration and enforcement of all weights and measures laws of the Ohio Revised Code. The office of the Chief of Weights and Measures and the state metrology laboratory, where the state's primary mass, length and volume standards are housed, are both located at the Department's laboratory facility in Reynoldsburg.

Presently, the Division of Weights and Measures has the responsibility of implementing six major programs.

Metrology - Ohio's metrology lab is well equipped with personnel capable of performing routine testing, calibrations and specialized requests with a high degree of technical and professional competence. The laboratory is a participant in the Laboratory Auditing Program administered by the National Bureau of Standards. The laboratory and state metrologists have also participated in the Northeast Measurement Assurance Program and its round-robin activities since the conception of the program in 1979. The Division continues to work with the National Bureau of Standards' Office of Weights and Measures to insure compliance with the "certification by measurement area" program. A Laboratory Quality Assurance Program has also been implemented. The Division recognizes the need to continually upgrade the staff training, measurement equipment and overall laboratory competence.

This year 9,894 official, commercial or scientific standards were submitted to the metrology laboratory for testing or calibration. The lab performed service for 203 different companies, 57 local jurisdictions in Ohio and 23 other governmental agencies.

National Type Evaluation Program (NTEP) Laboratory Ohio is known as the "cradle of the scale industry" due to the large number of major scale manufacturers that distribute their devices worldwide. The Ohio scale industry depends upon an effective, equitable state weights and measures program in order to complete profitably with industry from neighboring states, as well as with foreign manufacturers.

As a participating laboratory under the National Type Evaluation Program, Ohio has established itself as a leader in the field of weights and measures. Presently, only three other laboratories in the United States have NTEP authorization; one is the National Bureau of Standards' Office of Weights and Measures, the second is the State of California, and the third is the State of New York.

Ohio's NTEP Laboratory provided evaluation services to six Ohio companies and eighteen out-of-state companies during 1988. This center for the evaluation and approval of scale designs and other weighing and measure elements, thoroughly evaluated 65 devices and 29 indicators during the year. The National Bureau of Standards/Office of Weights and Measures issued "Certificates of Conformance" for 73 of the devices/indicators Ohio's NTEP staff evaluated.

Advise, Assist and Train - There are 88 counties and 9 cities in Ohio that have established weights and measures programs. All local jurisdictions check small capacity scales and gasoline pump meters. Many of the jurisdictions reweigh packages and some check parking meters, taxi meters, and investigate local complaints.

The Director of Agriculture and his Deputy State Sealer advise and assist these local sealers regarding their powers and duties. Under provisions of the Ohio Revised Code, the State shall provide for the training of local weights and measures sealers and may establish minimum training requirements.

Additionally, the Department assists the local weights and measures jurisdictions through the following programs:

Vehicle Scales - Ohio has five large capacity scale testing units. Two of the units are tractor trailer rigs that carry 40,000 pounds of calibrated test weights. Two are tri-axle units that carry 30,500 pounds of calibrated test weight. The other one carries 10,500 pounds of calibrated test weight.

This year 2,592 vehicle scales were tested and/or inspected—of this number, 733 were rejected for repair or condemned for replacement on the initial check, for a rejection rate of 28 percent.

DIVISION OF WEIGHTS & MEASURES
Inspection Statistics
1988

FIELD PROGRAMS:

	INITIAL CHECK			RECHECK			Total Tested &/or Inspected	Total Known	Rejection Rate
	Sealed	Rejected	Condemned	Sealed	Rejected	Condemned			
Large Capacity Vehicle Scales	1,663	656	77	82	32	7	2,713	2,868	30.6%
State Patrol Vehicle Scales	13	6	0	6	0	0	19	19	31.6%
Livestock Scales	0	0	0	0	0	0	0	206	

	INITIAL CHECK				RECHECK				Total Tested &/or Inspected	Total Known	Rejection Rate
	Sealed	Adjusted	Rejected	Condemned	Sealed	Adjusted	Rejected	Condemned			
Fuel Meters (100 gallons)	2,143	436	33	4	21	6	0	1	2,218	2,300	21.7%
L.P. Gas Meters	417	218	23	2	18	14	2	0	484	626	54.9%

	Number Lots Checked	Number Packages Checked	Number Packages Represented In Lots	Number Lots Rejected	Number Packages Ordered Off-Sale
Random	333	8,848	456,093	65	58,802
Standard	100	997	4,582	48	2,667

	Number Products	Number Products Suspected Short	Percentage Suspected	Establishments Visited	Violation Letters Issued
Audit Testing	1,682	97	5.7%	317	61

NTEP Lab Stats

Devices < 2000 lb. Evaluated	Devices > 2000 lb. Evaluated	Cash Registers, Indicators Only Evaluated	Total Devices/Indicators Evaluated	Certificates of Conformance Issued
53	12	29	94	73

6 Ohio companies received type evaluation services.

18 Out-of-State companies received type evaluation services.

Fuel Meters - Ohio's Weights and Measures Division operated two 100 gallon provers on trailers and a 95 gallon L.P. Gas prover during the year. State weights and measures inspectors travel the State with these provers, inspecting and testing fuel delivery truck meters. In 1988, 2,660 such meters were inspected and/or tested and of this number, 716 required adjustments or were condemned for repair or replacement on the initial tests/inspections for an average rejection rate of 21.7 percent for fuel meters and 54.9 percent on L.P. gas meters.

Package Control - Ohio has two weights and measures staff members assigned to check prepackaged commodities (fertilizer, meat, milk, produce, etc.). Special assistance, specialized complaints and consumer complaints are also investigated under this program (short weight and short measure in firewood, kerosene, insulation, etc.).

Sixty-one (61) violation letters were sent to packers in violation of Ohio law notifying them of the nature of their violations (short weight, improper labels, etc.). In addition, a listing of documented package violations was included in each issue of the Division's "Quarterly Review" newsletter for local weights and measures jurisdictions' review.

COYOTE INDEMNITY FUND

March 1988 - February 1989
39 Counties

COUNTY	Poultry	& Amount	Sheep	& Amount	Calves	& Amount	Goats	& Amount	
Adams			43	2,349.94					
Ashland			14	892.00					
Athens			3	356.00					
Auglaize			2	85.00					
Belmont					1	80.00			
Brown			5	360.00					
Butler	16	138.00	27	1,676.00	2	375.00			
Carroll					2	200.00			
Champaign			4	154.00					
Clinton			38	1,880.00			3	210.00	
Columbiana			1	100.00					
Coshocton			14	730.00					
Crawford			1	60.00					
Darke			2	100.00					
Delaware			16	546.00					
Erie			2	80.00					Pigs
Fayette			25	2,560.00					5 /155.00
Geauga			2	230.00					
Guernsey			16	613.10	2	240.00	1	150.00	
Hancock			3	195.00					
Hardin			9	270.00					
Harrison			31	1,625.00	1	100.00			
Highland			3	197.50					
Jefferson					1	125.00			
Logan			52	4,060.00					
Madison			4	293.00					
Miami			3	119.00					
Monroe			5	75.00					
Muskingum			28	1,262.00	1	150.00			
Montgomery					2	200.00			
Noble			11	670.00					
Richland			2	100.00					
Seneca			2	130.00	2	280.00			
Shelby			3	145.00					
Stark	6	30.00							
Tuscarawas			4	190.00					
Union			10	408.00					
Wayne			1	80.00					
Wyandot			7	271.32					
GRAND TOTAL	**22**	**168.00**	**393**	**22,862.86**	**14**	**1,750.00**	**4**	**360.00**	**155.00**

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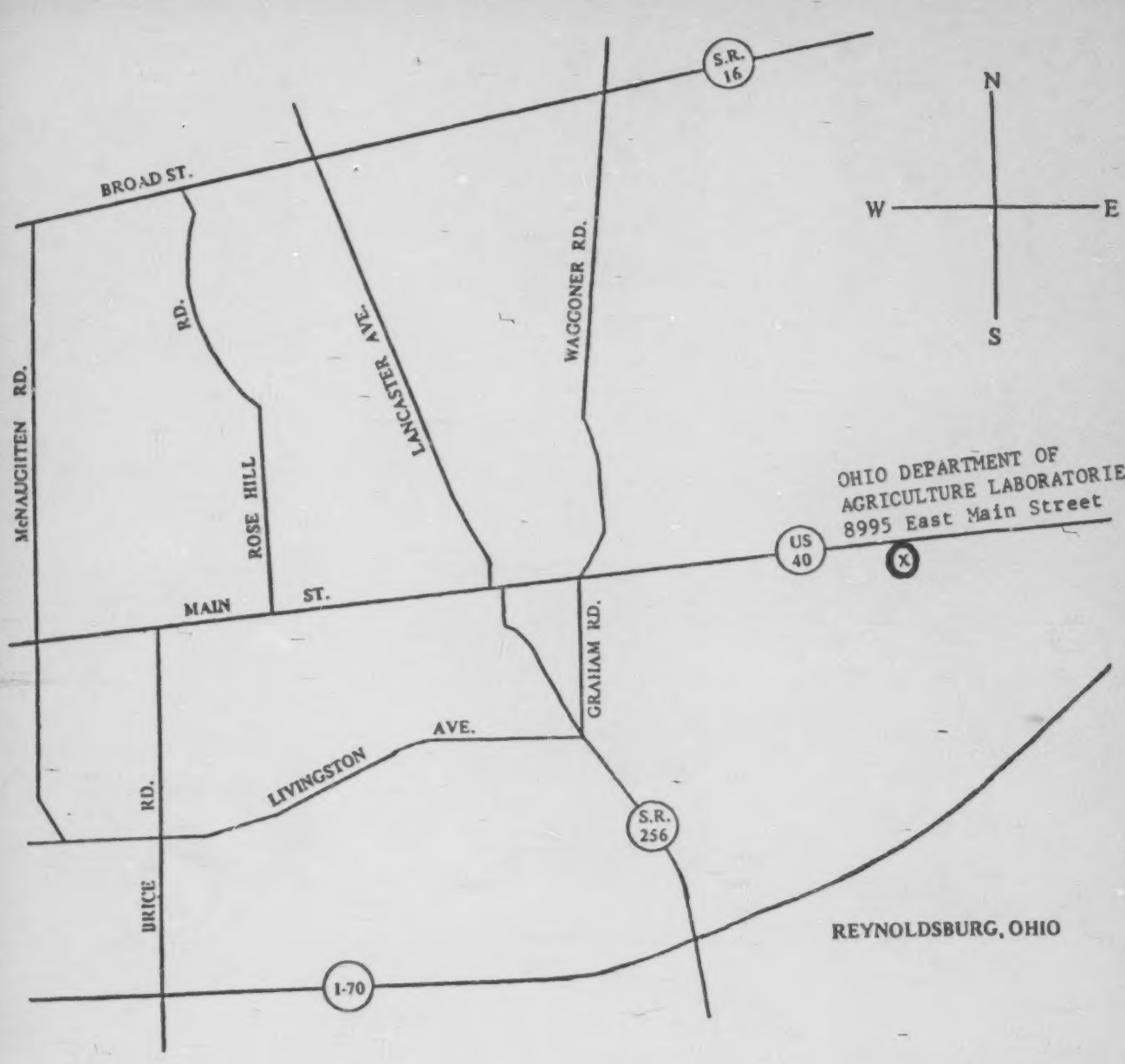
S.R. 16
BROAD ST.
N
W
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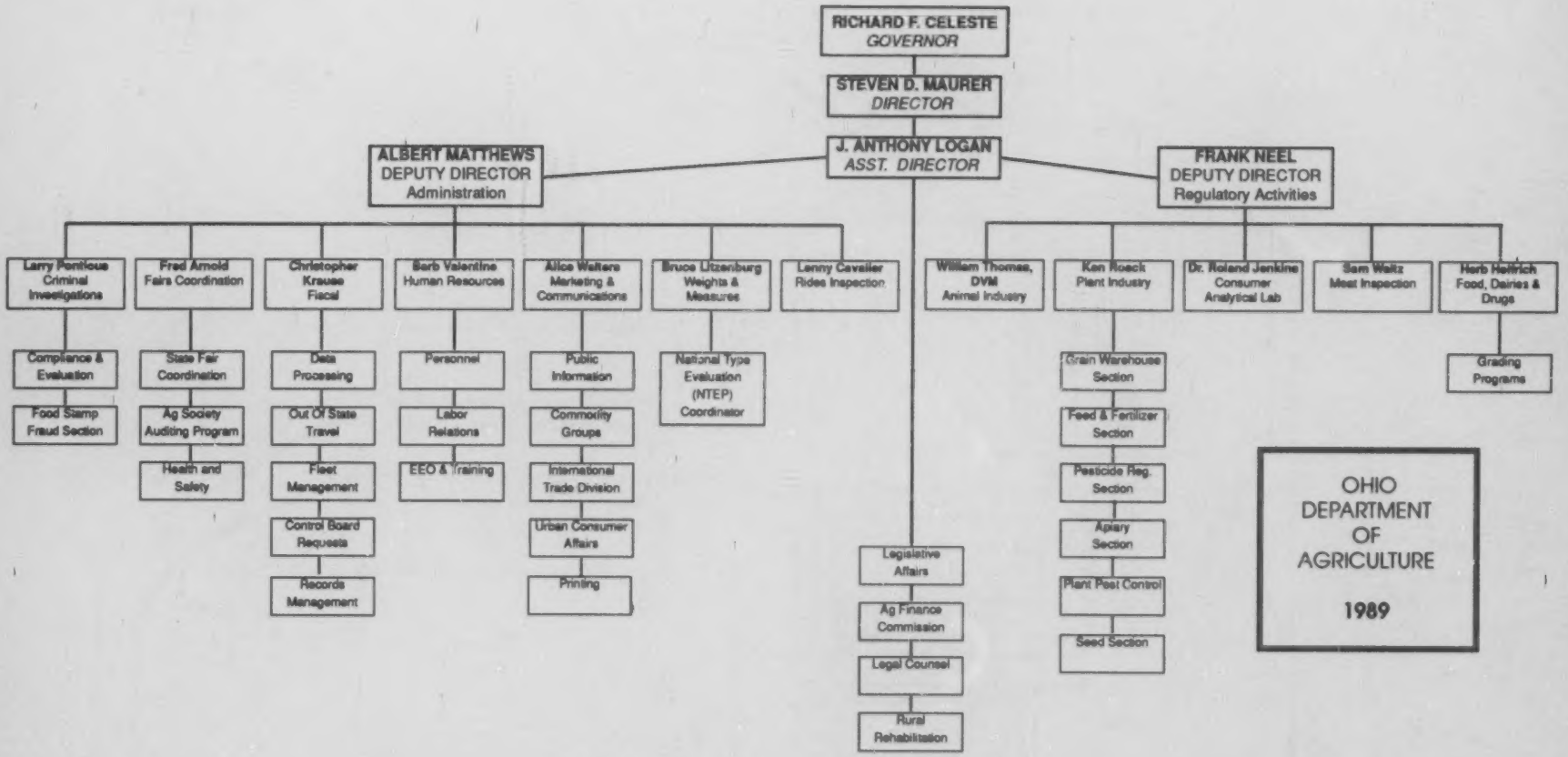
S
McNAUGHTEN RD.
ROSE HILL RD.
LANCASTER AVE.
WAGGONER RD.
OHIO DEPARTMENT OF AGRICULTURE LABORATORIES
8995 East Main Street
US 40
MAIN ST.
GRAHAM RD.
LIVINGSTON AVE.
BRICE RD.
S.R. 256
REYNOLDSBURG, OHIO
I-70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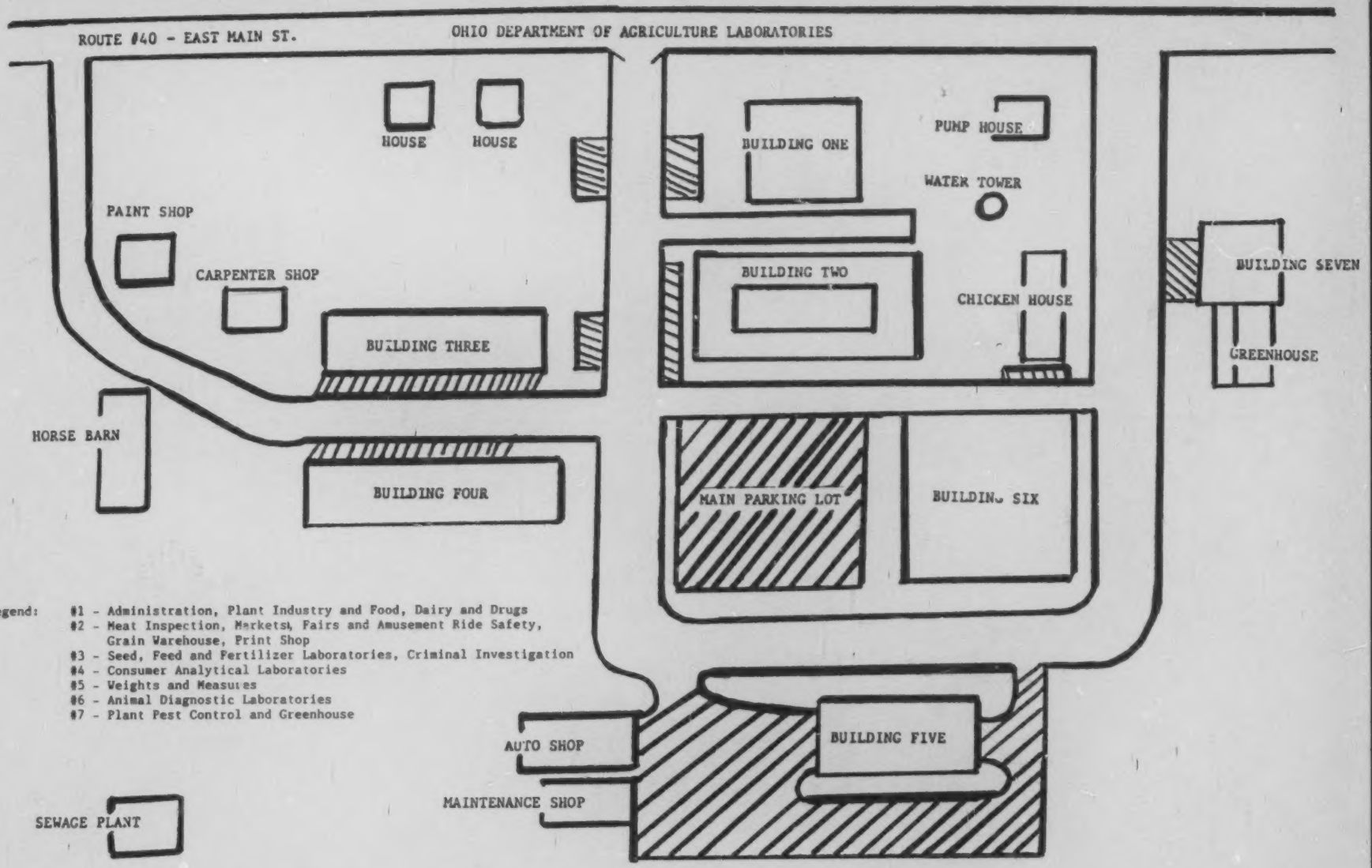
1989


ROUTE #40 - EAST MAIN ST.
OHIO DEPARTMENT OF AGRICULTURE LABORATORIES
HOUSE
HOUSE
PAINT SHOP
CARPENTER SHOP
BUILDING THREE
HORSE BARN
BUILDING FOUR
BUILDING ONE
PUMP HOUSE
WATER TOWER
BUILDING TWO
CHICKEN HOUSE
BUILDING SEVEN
GREENHOUSE
MAIN PARKING LOT
BUILDING SIX
Legend: #1 - Administration, Plant Industry and Food, Dairy and Drugs
#2 - Meat Inspection, Markets, Fairs and Amusement Ride Safety, Grain Warehouse, Print Shop
#3 - Seed, Feed and Fertilizer Laboratories, Criminal Investigation
#4 - Consumer Analytical Laboratories
#5 - Weights and Measures
#6 - Animal Diagnostic Laboratories
#7 - Plant Pest Control and Greenhouse
AUTO SHOP
BUILDING FIVE
MAINTENANCE SHOP
SEWAGE PLANT

S6240-1-U

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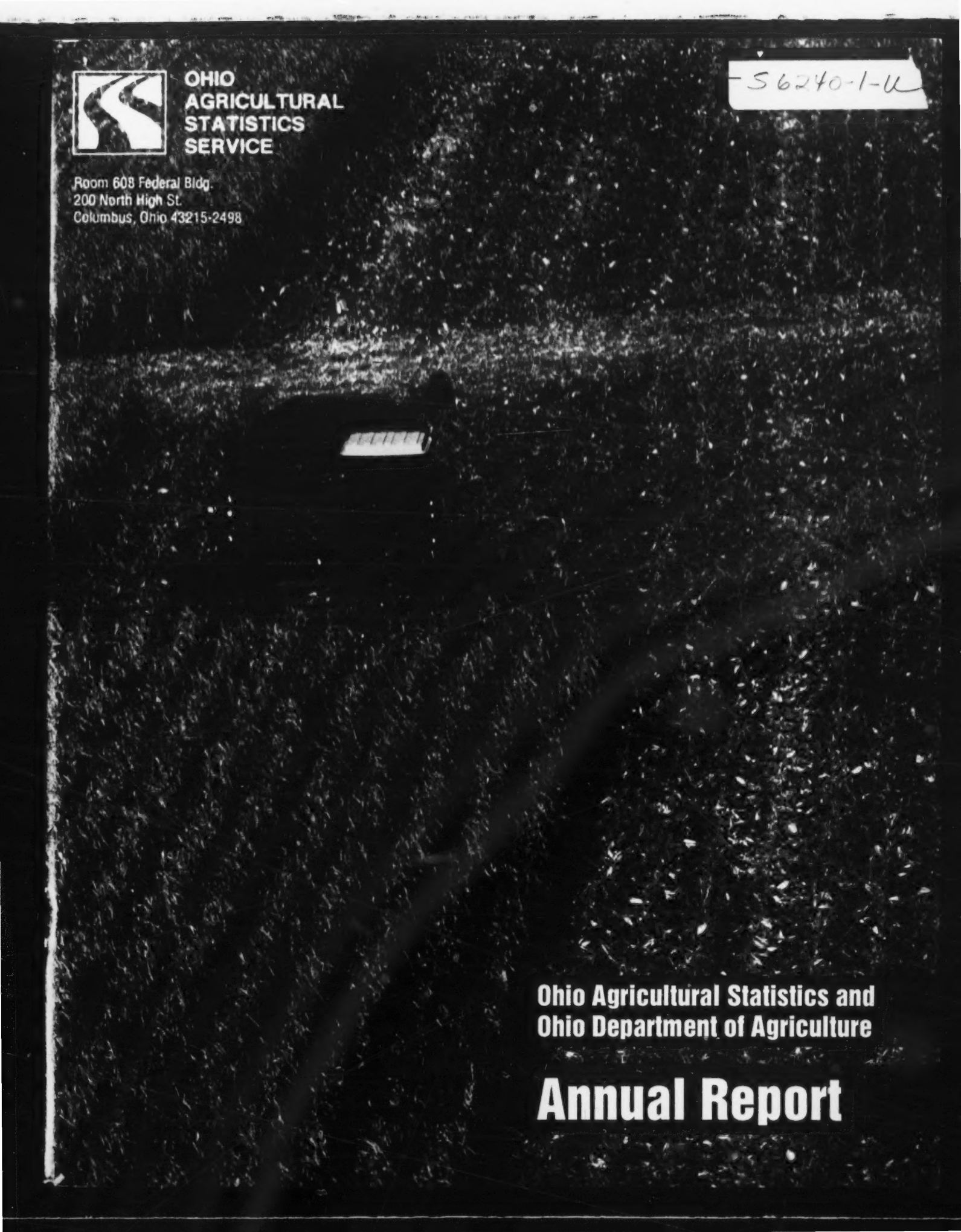

Ohio Agricultural Statistics and
Ohio Department of Agriculture

Annual Report

RICHARD F. CELESTE
GOVERNOR

STATE OF OHIO
OFFICE OF THE GOVERNOR
COLUMBUS 43266-0601

As Governor, I take great pride in the success of Ohio's Agriculture Industry--after all, it's the Number One contributor to our economy! Generating over $40 billion dollars yearly, Agriculture has been the livelihood of generations of Ohioans.

During the past eight years of the Celeste Administration, net farm income and prices for agricultural products have increased. The Ohio Department of Agriculture was reorganized, with a greater emphasis being placed on marketing our agricultural products here and abroad. The Administration instituted the First-Time Farmer Tax Exempt Bond Program which has enabled many young farmers to pursue the dream of owning their own land. State Treasurer Withrow created the Linked Deposit Program which has also helped many farmers.

The environment has received considerable attention, with non-point pollution becoming more understood. We have worked with farmers across the state to develop programs which help them minimize potential water pollution from agricultural run-off. In addition, we have consistently worked to provide strong, stable funding for Ohio's 88 Soil and Water Conservation Districts.

Both the Ohio Cooperative Extension Service and the Ohio Agricultural Research and Development Center have had significant increases in their budget allocation since Biennium '85-'87. They received special funding from the State during the 1986 Farm Crisis, and the Ag Income Enhancement Program through The Ohio State University's Department of Agricultural Economics will to be an important resource to our farmers.

The 1989 Annual Report has been made possible through the cooperation of the Ohio Department of Agriculture, the Ohio Agricultural Statistics Service, and the Ohio Cooperative Extension Service. However, it is up to all of us to support and encourage the continued growth of our agricultural industry, especially by purchasing home-grown and processed Ohio foods.

With best regards,

Richard F. Celeste

Richard F. Celeste
Governor

Ohio Department of Agriculture

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Richard F. Celeste, Governor
Steven D. Maurer, Director

It is with pleasure that I present to you the 1989 Annual Report of the Ohio Department of Agriculture (ODA) and annual data from the Ohio Agricultural Statistics Service. You now have at your fingertips the most comprehensive guide to Ohio agriculture which can be found. Those in search of statistics and general knowledge will find the accurate information contained within to be of great help.

In an ironic twist on the weather we experienced during 1988, the spring of 1989 was a rain-blown, soggy one. This affected the planting season in many areas of Ohio. Yields were reduced and trouble with molds and fungus also resulted from the wet weather. Fortunately, those plants which were already in the ground did well and the overall state totals were not significantly affected.

This publication is a result of the combined efforts of ODA, the Agricultural Statistics Service and the Ohio Cooperative Extension Service, and was prepared in accordance with Section 149.01 of the Ohio Revised Code.

Sincerely,

OHIO DEPARTMENT OF AGRICULTURE

Steven Maurer

Steven D. Maurer
Director

Equal Opportunity in Employment and Services

OHIO
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Throughout the 1989 Ohio Agricultural Statistics and Ohio Department of Agriculture Annual Report you'll find facts and information on many facets of our state's agricultural industry. Most of these data were made possible by the voluntary cooperation of farmers, agribusiness people, and others involved in Ohio's basic industry. Without their cooperation, completing thousands of questionnaires on hundreds of surveys conducted each year, this annual reference would not be possible.

Appreciation is given to the technical and support staffs of the Ohio Department of Agriculture, the Ohio Cooperative Extension Service and the Ohio Agricultural Statistics Service. A special word of thanks is reserved for the fine staff of field and office enumerators who spend many hours collecting data from Ohio farmers and agribusiness owners.

We have changed the format of the tables containing county data so that the counties are listed alphabetically rather than by agricultural statistics district. This was done to accommodate those users who are not familiar with agricultural statistics districts or who might wish to combine counties into districts with different boundaries. This should also make comparisons with county tables in other publications much easier since counties are usually listed alphabetically. Please let me know what you think of the change.

Agricultural information on Ohio is available dating back to 1960 in issues of Ohio Agricultural Statistics and other publications. County data for all states are available on computer tape from the Agricultural Statistics Board.

James E. Ramey
State Statistician

1989
OHIO AGRICULTURAL STATISTICS
and
Ohio Department of Agriculture
Annual Report

Compiled by
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OHIO COOPERATIVE EXTENSION SERVICE
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ACKNOWLEDGEMENTS

Estimates made by the Ohio Agricultural Statistics Service are based on information supplied by farmers and agri-businesses. These estimates are the result of the data collected on probability designed surveys. Considerable information is collected from farmers randomly selected for telephone or personal interviews. Data for county estimates are collected from a large mail survey and, where available, check data are used to the extent possible.

Our sincere thanks are also extended to the office staff, field and telephone interviewers of the Ohio Agricultural Statistics Service. The cover design, layout, and technical assistance were provided by William Warren, John K. Victor and Lloyd Lemmermann of the Ohio Cooperative Extension Service.

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OHIO HISTORICAL AGRICULTURAL STATISTICS

YEAR	NUMBER OF FARMS	CORN ACRES HARVESTED	CORN GRAIN YIELD	SOYBEANS ACRES HARVESTED	SOYBEAN YIELD	WINTER WHEAT ACRES HARVESTED	WINTER WHEAT YIELD
		(000)	Bu./Ac.	(000)	Bu./Ac.	(000)	Bu./Ac.
1990							
1989	87,000	3,390	118.0	3,980	32.0	1,230	51.0
1988	85,000	3,550	85.0	3,700	27.0	920	50.0
1987	84,000	3,260	120.0	3,900	37.0	850	58.0
1986	88,000	3,880	128.0	3,620	40.5	1,050	46.0
1985	89,000	4,240	127.0	3,870	41.5	950	62.0
1984	90,000	4,130	118.0	3,770	36.5	1,100	44.0
1983	92,000	3,060	80.0	3,280	32.0	1,200	49.0
1982	93,000	4,255	114.0	3,700	36.0	1,200	43.0
1981	94,000	4,040	96.0	3,450	28.5	1,600	44.0
1980	95,000	4,120	113.0	3,760	36.0	1,370	49.0
1979	96,000	3,830	115.0	4,080	35.5	1,320	48.0
1978	96,000	3,850	105.0	3,870	33.0	1,080	39.0
1977	97,000	3,870	105.0	3,480	35.0	1,540	47.0
1976	99,000	4,080	103.0	2,880	33.0	1,600	40.0
1975	101,000	3,575	93.0	3,100	33.0	1,680	42.0
1974	112,000	3,820	75.0	3,140	26.0	1,450	41.0
1973	113,000	3,270	80.0	3,590	25.5	800	32.0
1972	114,000	3,286	92.0	3,010	26.5	1,029	45.0
1971	116,000	3,776	91.0	2,634	30.5	944	44.0
1970	118,000	3,249	79.0	2,550	28.5	925	38.0
1969	120,000	3,013	87.0	2,475	29.5	1,017	38.0
1968	122,000	3,096	86.0	2,325	30.5	1,196	37.5
1967	124,000	3,516	79.0	2,231	22.5	1,514	34.0
1966	126,000	3,328	84.0	2,105	28.5	1,183	39.0
1965	129,000	3,295	74.0	2,044	24.5	1,258	32.0
1964	131,000	3,328	65.0	1,825	22.5	1,446	32.0
1963	135,000	3,200	78.0	1,738	23.5	1,461	38.0
1962	139,000	2,963	76.0	1,756	25.0	1,238	32.0
1961	144,000	2,718	74.0	1,722	28.0	1,457	21.0
1960	149,000	3,576	68.0	1,499	24.5	1,428	35.0
1959	154,000	3,687	62.5	1,455	25.0	1,264	24.5
1958	158,000	3,206	60.0	1,429	26.0	1,436	31.0
1957	162,000	3,206	54.0	1,404	23.0	1,436	22.0
1956	168,000	3,523	60.0	1,301	24.0	1,496	26.0
1955	174,000	3,708	59.0	1,193	24.5	1,496	29.0
1954	180,000	3,708	61.0	1,122	25.0	1,740	27.0
1953	186,000	3,531	55.0	1,007	20.5	2,384	28.5
1952	192,000	3,567	53.0	940	22.0	2,249	24.5
1951	200,000	3,532	48.0	1,124	19.0	1,906	18.0
1950	208,000	3,364	52.0	1,090	22.5	2,118	22.0
1949	211,000	3,617	54.0	875	24.0	2,353	25.0
1948	214,000	3,691	58.5	908	20.5	2,353	24.5
1947	216,000	3,386	41.0	950	18.5	2,179	22.5
1946	219,000	3,641	49.0	903	18.0	1,831	26.5
1945	223,000	3,468	50.5	1,077	18.0	2,129	27.0
1944	225,000	3,651	40.4	1,243	17.6	1,918	22.7
1943	230,000	3,444	51.0	1,213	21.0	1,523	16.5
1942	236,000	3,249	56.0	1,051	22.5	1,655	21.0
1941	241,000	3,217	49.5	656	20.0	1,902	25.0
1940	244,000	3,185	38.0	561	16.0	1,921	22.0
1939	248,000	3,425	49.5	500	21.1	1,904	20.0
1938	251,000	3,568	44.0	281	21.0	2,379	19.5
1937	254,000	3,796	43.0	171	19.0	2,430	19.0
1936	256,000	3,685	33.0	132	15.5	2,175	18.5
1935	257,000	3,649	44.0	124	21.0	2,131	22.0

OHIO HISTORICAL AGRICULTURAL STATISTICS

YEAR	HAY ACRES HARVESTED	HAY YIELD	OATS ACRES HARVESTED	CATTLE INVENTORY	MILK COW INVENTORY	HOG INVENTORY	STOCK SHEEP INVENTORY
	(000)	Tons/Ac.	(000)	(000)	(000)	(000)	(000)
1990				1,680	354		205
1989	1,625	2.80	250	1,760	353	2,080	200
1988	1,625	2.18	200	1,820	350	2,210	210
1987	1,400	3.06	250	1,800	350	2,100	245
1986	1,460	2.95	160	1,840	370	2,000	225
1985	1,450	3.17	310	1,835	365	1,980	220
1984	1,350	2.81	220	1,880	383	1,970	225
1983	1,260	2.57	240	1,850	393	2,200	250
1982	1,340	2.64	340	1,850	382	1,920	260
1981	1,420	2.53	270	1,815	375	2,050	260
1980	1,430	2.51	290	1,825	375	2,150	265
1979	1,440	2.51	290	1,750	375	2,120	290
1978	1,550	2.50	340	2,025	398	2,160	310
1977	1,550	2.30	370	2,250	398	1,750	380
1976	1,540	2.31	440	2,305	390	1,900	382
1975	1,510	2.36	465	2,350	405	1,675	404
1974	1,380	2.19	475	2,150	412	1,950	441
1973	1,500	2.20	540	2,134	434	2,274	481
1972	1,476	2.12	367	2,113	439	2,320	538
1971	1,550	2.07	539	2,072	444	2,611	575
1970	1,440	2.09	528	2,031	448	2,838	605
1969	1,415	2.05	585	2,011	499	2,557	617
1968	1,600	2.14	692	2,011	529	2,583	636
1967	1,654	1.82	494	2,052	557	2,557	642
1966	1,786	2.04	642	2,094	586	2,388	649
1965	1,853	1.86	606	2,204	630	2,191	662
1964	1,907	1.88	652	2,272	670	2,331	669
1963	1,906	1.78	767	2,295	705	2,619	727
1962	1,894	1.68	825	2,272	742	2,757	790
1961	2,005	1.96	737	2,272	757	2,651	832
1960	1,937	1.84	1,023	2,250	765	2,599	924
1959	1,977	1.73	1,100	2,228	773	2,707	973
1958	2,118	1.76	1,068	2,251	822	2,603	1,046
1957	2,154	1.67	1,101	2,345	874	2,479	1,036
1956	2,244	1.72	1,101	2,393	892	2,666	1,036
1955	2,395	1.71	1,251	2,369	939	2,836	1,046
1954	2,525	1.61	1,117	2,417	978	2,578	1,036
1953	2,606	1.57	1,044	2,347	988	2,302	1,036
1952	2,516	1.48	1,186	2,235	988	2,502	987
1951	2,590	1.52	1,140	2,170	1,008	3,014	940
1950	2,563	1.45	1,075	2,107	1,029	3,173	940
1949	2,255	1.43	1,265	2,107	1,039	3,051	979
1948	2,384	1.43	1,171	2,128	1,060	2,962	1,053
1947	2,497	1.40	714	2,150	1,082	2,962	1,132
1946	2,536	1.52	1,348	2,172	1,104	3,118	1,258
1945	2,560	1.48	1,162	2,239	1,138	3,182	1,430
1944	2,605	1.39	1,047	2,262	1,118	3,182	1,625
1943	2,662	1.44	1,126	2,196	1,085	4,133	1,958
1942	2,501	1.56	1,185	2,132	1,053	3,563	1,939
1941	2,563	1.36	1,150	2,070	1,032	3,181	1,901
1940	2,670	1.48	1,009	2,029	1,022	3,181	1,920
1939	2,428	1.40	1,009	1,991	1,018	3,420	1,920
1938	2,412	1.49	1,121	1,932	1,002	2,800	2,010
1937	2,312	1.40	1,246	1,951	1,022	2,607	2,010
1936	2,571	1.04	1,210	1,991	1,033	2,660	2,230
1935	2,555	1.42	1,407	1,951	1,065	2,333	2,256

PROFILE OF OHIO AGRICULTURE **1989** 1/ 6/

Commodity	Unit	Ohio Rank 2/	Ohio Prod. or 3/ inventory	State ranked first State 2/	State ranked first Prod. or inventory
			Thousands		Thousands
Field Crops					
Corn for grain	Bu.	6	342,200	Iowa	1,445,500
Corn for silage	Ton	10	3,360	Wisconsin	9,932
Oats	Bu.	8	15,750	Iowa	54,000
Wheat, winter	Bu.	6	62,730	Kansas	213,600
Rye	Bu.	19	155	S. Dakota	3,240
Soybeans	Bu.	5	127,360	Illinois	354,000
Hay, all (baled)	Ton	13	4,553	Texas	9,582
Sugar beets	Ton	12	199	Minnesota	5,456
Potatoes, all	Cwt.	23	1,462	Idaho	102,475
Tobacco	Lb.	9	15,925	N. Carolina	541,056
Vegetables, Fresh					
Sweet corn	Cwt.	5	910	Florida	5,270
Lettuce	Cwt.	11	168	California	56,414
Tomatoes	Cwt.	10	392	Florida	18,361
Celery	Cwt.	5	186	California	14,533
Onions, storage	Cwt.	9	189	Oregon	6,563
Total fresh vegetables 4/	Cwt.	12	2,331	California	139,687
Vegetables, Processing					
Tomatoes for processing	Ton	2	391.30	California	8,585.33
Cucumbers for rocessing	Ton	6	39.29	Michigan	147.00
Total Processing Vegetables	Ton	6	431.07	California	8,662.34
Fruit					
Apples	Lb.	10	125,000	Washington	5,000,000
Grapes, All	Ton	7	8	California	5,355
Grapes, processed	Ton	7	7.8	California	4,638
Peaches	Lb.	18	8,000	California	1,451,000
Strawberries	Cwt.	10	55	California	8,358
Poultry and Poultry Products					
Chickens, total inv., Dec. 1, 1989	Head	6	21,820	California	35,800
Chickens - sold	Lb.	9	37,000	N. Carolina	89,680
Broilers - production	Lb.	21	72,000	Arkansas	3,866,092
Turkey production	Lb.	12	110,290	N. Carolina	991,800
Egg prod. Dec. 1988-Nov. 1989	Mil. eggs	4	4,353	California	7,317
Livestock and Livestock Products					
Hogs & pigs inv., Dec. 1, 1989	Head	8	2,080	Iowa	13,500
Hogs & pigs production (live wt.)	Lb.	8	888,876	Iowa	5,543,845
All cattle & calves inv., Jan. 1, 1990	Head	21	1,680	Texas	13,400
Cattle & calves production (live wt.)	Lb.	25	498,736	Texas	5,634,700
Beef cows inv., Jan. 1, 1990	Head	26	380	Texas	5,310
Milk cows inv., Jan. 1, 1990	Head	7	354	Wisconsin	1,760
Sheep & lamb inv., Jan. 1, 1990	Head	14	270	Texas	2,090
Sheep & lamb production (live wt.)	Lb.	14	17,230	Texas	126,657
Wool	Lb.	13	1,822	Texas	18,000
Cattle slaughtered	Head	18	295.2	Kansas	6,219.3
Hogs slaughtered	Head	10	3039.0	Iowa	25,586.3
Calves slaughtered	Head	8	112.0	New York	394.2
Sheep & lambs slaughtered	Head	17	23.2	Colorado	1,685.0
Red meat production	Lb.	16	738,240	Iowa	6,029,946
Livestock slaughtering establishments (not 000) 1/1/90	No.	5	220	Iowa	276

PROFILE OF OHIO AGRICULTURE 1989 1/ 6/

Commodity	Unit	Ohio Rank 2/	Ohio Prod. or inventory 3/	State ranked first State 2/	State ranked first Prod. or inventory
			Thousands		Thousands
Milk and Milk Products					
Milk production	Mil. lb.	8	4,555	Wisconsin	24,000
Milk-Equivalent used for MFG dairy production	Mil. lb.	11	1,808	Wisconsin	20,684
All cheese (excl. cottage cheese)	Lb.	13	92,137	Wisconsin	1,847,455
Swiss cheese	Lb.	1	56,933	Ohio	56,933
American type cheese	Lb.	15	15,264	Wisconsin	924,206
Lowfat cottage cheese	Lb.	3	16,914	New York	67,510
Creamed cottage cheese	Lb.	4	40,310	New York	72,238
Cottage cheese curd	Lb.	6	21,049	New York	90,365
Ice cream	Gal.	8	30,571	California	107,758
Ice milk	Gal.	8	14,787	California	42,262
Milk sherbet	Gal.	5	2,577	California	5,208
Water ices	Gal.	9	681	Missouri	5,777
Manufactured dairy plants (not 000)	No.	6	72	Wisconsin	309
Miscellaneous					
Cash Receipts 1988	Mil. Dol.	15	3,629	California	16,598
Number of farms 1989	No.	7	87.0	Texas	186.0
Operations with cattle	No.	9	42.0	Texas	142.0
Operations with hogs	No.	6	14.2	Iowa	37.0
Operations with sheep	No.	3	7.3	Iowa	10.0
Operations with milk cows	No.	5	9.2	Wisconsin	34.0
Honey Production	Lb.	30	1,060	California	18,190
Fertilizer consumption 5/ (July 1988-June 1989)	Ton	10	1,563.0	Illinios	3,585.0

1/Data reported for 1989 unless noted otherwise in stub. 2/Rank among the States based on production or inventory. 3/ Thousand unless noted otherwise in stub. 4/ Includes small quantity of processing vegetables. 5/ Preliminary. 6/ Ohio also produces barley, milo, canola, dry beans, buckwheat, speltz, clover seed, timothy seed, goats, rabbits, ducks, and maple syrup.

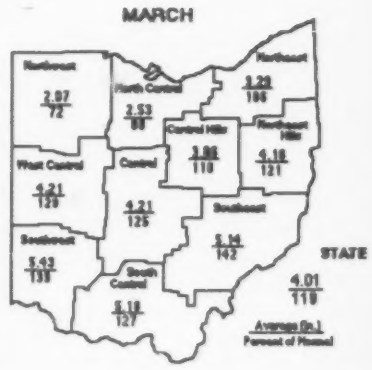
INDEX NUMBERS OF CROP AND LIVESTOCK PRODUCTION, OHIO, 1982-89 1/

	1982	1983	1984	1985	1986	1987	1988	1989
Crops								
Feed grains	119	59	119	134	123	97	66	89
Food grains	71	81	67	81	67	68	64	87
Soybeans	109	86	113	132	120	118	82	105
Other field crops	99	73	101	79	72	64	64	64
Seed crops and hay	99	91	107	129	121	120	100	128
Vegetables, all	96	88	101	122	123	107	87	103
Fruit	196	151	171	179	120	196	136	162
Total crops	110	76	111	127	116	105	76	99
Livestock & Livestock Products:								
Meat animals	102	111	108	108	108	110	117	112
Poultry & poultry products	128	134	153	158	170	194	200	203
Milk	102	107	104	109	111	109	107	102
Wool	66	59	57	59	60	60	57	56
Total livestock & products	105	112	112	114	116	119	123	118
Total, all commodities	108	88	111	123	116	110	92	106

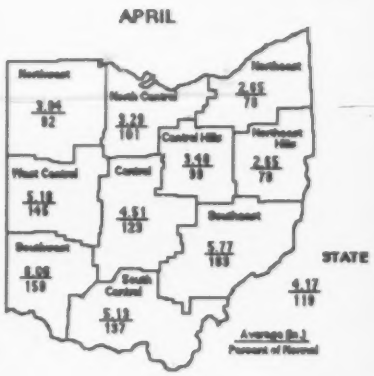
1/Base year 1977=100

OHIO 1989 CROP SUMMARY

The 1989 growing season went into the record books sporting one of the wettest springs ever experienced in Ohio. Precipitation was above normal from February through June and again in September and October. The most significant wet period was during the normal planting and first cut haying season, specifically the months of April, May and June. Farmers could not get into their fields to plant crops or cut and cure good quality hay.

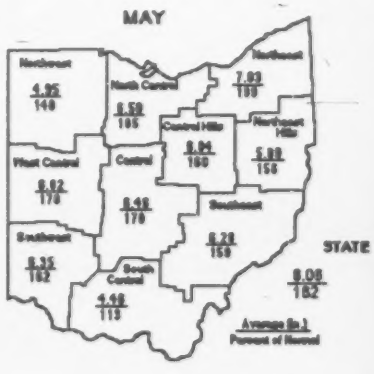


The winter of 1988-89 was warmer than normal with less than average precipitation during December 1988 and January 1989. The lack of rain or snow was not a particular problem. Overwintering crops, notably winter wheat, went into the winter season with enough moisture and didn't miss the snow cover because of the mild weather. Before vigorous growth began in the spring above normal rainfall kept plenty of moisture in the soil. February precipitation was 27 percent above normal, March and April were each 19 percent above normal, May rainfall surged to 62 percent more than normal and June provided 46 percent more than normal rainfall. Farmers were repeatedly subject to delays in planting crops. Some switched from planting corn to soybeans, others planted shorter season corn. Another option was to sign up for prevented plantings with the Agricultural Stabilization and Conservation Service. Some seeds that did germinate and begin growth were attacked by slugs and other pests. Spring planted crop growth was checked by saturated soils and limited sunlight. Many farmers missed the optimum time to cut stands for hay. Some cattle and milk producers diverted cuttings to haylage or green chop. Others who did not have any options either lost the cutting or baled low quality hay.



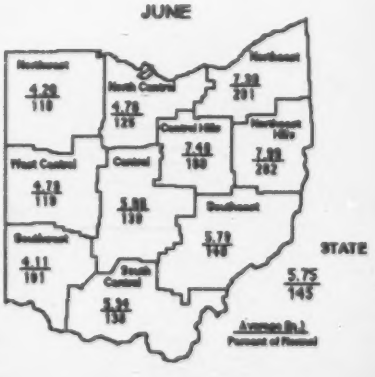
Farmers finally got their crops planted; not necessarily their first choice. Concern quickly turned from getting the crops planted to maturing before the first frost in the fall. Many crops were planted late but maturity was not as late as could have been expected because of the late planting dates. The crops grew well during the summer. Heat stress was not a problem like during the summer of 1988. The temperature exceeded 86, the reading when stress begins, only a few times in 1989. Summer seemed to go on forever, or more correctly Indian summer. A few mild frosts occurred in October but the first outbreak of cold weather arrived after mid-November. Shortly after that temperatures took a steep slide to a series of record low temperatures in December. Several December nights the lows were well below 0 degrees.

The year-end survey results showed corn was harvested for grain from 2,900,000 acres with an average yield of 118 bushels per acre and a total production of 342,200,000 bushels. The area harvested is only 100,000 acres more than in 1983 and less than 400,000 acres above the record low set in 1961. Corn yield ties the fourth highest yield on record. The highest average of 128 bushels per acre was set in 1986. Production was 34 percent more than a year earlier and 33 percent less than the record high set in 1985. Soybeans were harvested from 3,980,000 acres with an average yield of 32 bushels and total production of 127,360,000 bushels. Harvested acreage tied the second highest on record, short by 100,000 acres of the record high set in 1979. The yield was 5 bushels more than a year earlier and 9.5 bushels off the record high set in 1985.



Winter wheat turned in a fairly good showing for 1989. Production reached 62,730,000 bushels, the seventh largest output on record. Yield, at 51 bushels per acre was the third highest on record; 11 bushels off the record set in 1985. Hay output for 1989 totaled 4,553,000 tons taking third place behind 4,600,000 tons produced in 1985 and 4,796,000 tons in 1908. Unfortunately the rain produced plenty of tonnage but also lowered quality in too many instances.

Ohio farmers planted 1,450,000 acres of winter wheat for all purposes including harvest for grain in 1990. This is 15 percent more than the acreage planted a year earlier and the most acreage planted since the fall of 1980 when 1,640,000 acres were planted. Three years ago Ohio farmers planted only 850,000 acres of wheat, the second lowest acreage on record. Winter wheat seeding was accomplished slightly quicker than the average pace of the previous five years and somewhat slower than a year earlier when a dry, clear fall allowed for uninterrupted seeding. This year's seeding done during the fall of 1989 at times was slowed by rains that also provided good conditions for germination, emergence, and growth. So far, during the winter of 1989-90, winter wheat had snow cover during the harshest subnormal temperatures of December. The snow melted by January 1 in the major Ohio wheat production areas but at the same time weather conditions moderated considerably from December.



OHIO CROP VALUES

The total value of production of all principal crops estimated in Ohio including field crops, fruit and vegetables totaled $2,487,597,000 in 1989, a 15 percent increase from the 1988 value of $2,142,962,000 and an 11 percent increase from the 1987 value of $2,214,355,000. The increase attained for 1989 compared with 1988 is almost entirely because of large total output which more than offset lower prices. The only commodities which had lower production in 1989 than in 1988 were rye, potatoes, sugarbeets, strawberries and grapes. Crops commanding higher prices in 1989 over 1988 included winter wheat, potatoes, tobacco, hay, strawberries, peaches, grapes, sweet corn, lettuce and tomatoes. Among the major field crops (soybeans, corn, hay, wheat and oats) value of production advanced 14 percent from 1988 to 1989. The larger production accounted for most of the increase from the year earlier although wheat and hay prices did increase slightly. Corn took top honors in value of production at $804.2 million, up 21 percent from a year earlier and almost a third of the value of all crops in 1989. The price of

corn for 1989 was $2.35, down 26 cents(10 percent) from 1988. Corn production increased 34 percent from 1988 to 1989. The 1989 soybean price, at $5.60, declined $1.94 per bushel from a year earlier and production increased by over 27 million bushels. The additional output was not enough to offset the price decline and value of production fell 5 percent. Winter wheat enjoyed the double benefit of higher output, up almost 17 million bushels and a slight price increase; up 7 cents to reach $3.80 per bushel. Oat price fell $1.16 per bushel from 1988 to 1989. Production was 75 percent above the record low 9 million bushels set in 1988. The combination of higher output and lower prices limited value of production to a 3 percent decline.

OHIO VEGETABLE PRODUCTION

Production of fresh market and processing vegetables, including strawberries, totaled 11,007,400 hundredweight (cwt.) in 1989 compared with 9,579,600 cwt. produced in 1988. Several interesting patterns developed this year in relation to both fresh market and processing vegetable crops. First acreage for all processing vegetables were down both individually and cumulatively. Reciprocally, all fresh market acreage, (with the exception of onions and strawberries) increased. The overall acreage decrease for processing vegetables was only 2 percent, while the fresh market acreage increase was 4 percent.

Yields for all fresh market and processing vegetable crops (again with the exception of strawberries) showed higher yields than a year earlier. The range of yield increases averaged from 10-85 cwt. per acre, depending on commodity. Except for strawberries, the 1988 production totals for all fresh market and processing vegetables increased. Overall, processing vegetable production rose 9 percent, while fresh market vegetable production registered a gain of 44 percent.

Late spring rains hampered planting operations for many days. The acreage that had already been planted was in danger of being washed away. Most vegetable crops were planted later than anticipated and in some cases replanted. Various records were broken in the 1989 vegetable growing season compared with 1988. Strawberries for the 1989 season were down on acreage, production, yield and total value. Ohio strawberry farmers reported 1,200 acres harvested; the lowest acreage reported since strawberry estimates began in 1918.

Sweet corn growers were able to plant before the heavy rains delayed planting operations. Nevertheless, some short season varieties bridged the gap to maintain normal marketing activities. A record high for 1989 sweet corn prices was noted averaging $14.10 per cwt. Fresh market tomatoes set a similar high record as average prices were estimated at $36.90 per cwt. Processing vegetables seemed to follow a pattern of lower acreage, higher yields, increased production and larger total farm values. Processing cucumbers, however, received $2 per ton less than last year. Ohio ranks second in the U.S. for processing tomato production and has also attained notoriety as the "birthplace" of the tomato (Reynoldsburg, Ohio).

The percent of acreage seeded vs. transplanted rose 2 percent from 1988 ending a 9 year downward trend. Some minor insect infestation was reported earlier in the season, however, year-end survey results indicated a fairly average year. Tomato seeds from a 5 year space mission satellite may be available for research and educational use in Columbus schools as early as March 1990. Collectively, Ohio vegetable producers fared much better than in 1988. Receipts totaled $80,278,000 for the 1989 crop year and $57,957,000 in 1988, a 39 percent increase in total farm value. The only vegetable commodities receiving less per unit in 1989 were onions, celery and processing cucumbers.

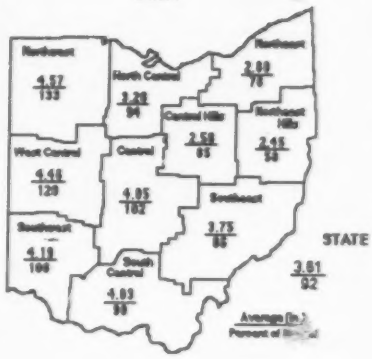
OHIO FRUIT PRODUCTION

Ohio apple production increased by 32 percent from 1988. Frost damage is always an immediate concern during the crucial stage of blossoming, however warm temperatures prevailed and minimum damage was sustained. Pollination was hampered slightly by heavy spring rains, but not enough to substantially effect the fruit set. Yield climbed to 12,500 lbs. per acre which is up 30 percent from 1988 but down 16 percent from 1987. Even though Ohio's apple supply increased by 32 percent from 1988, prices were maintained close to last year's level at 17.6 cents per pound, generating an additional $5.2 million to apple producers.

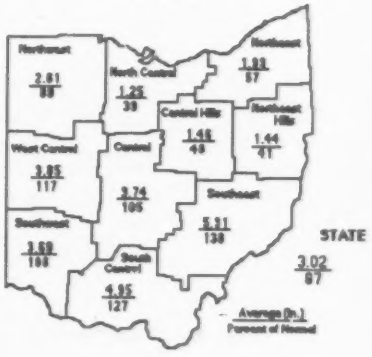
After the drought of 1988, peach production rose to 8 million pounds, up 33 percent from 1988. The calyx method of measuring percentage crop loss due to environmental conditions was closely monitored last spring as concern mounted toward the possibility of adverse weather, inadequate pollination and latent drought damage. Bearing acres increased 10 percent and yield per acre increased 20 percent from last year. Despite increased production, average price rose to 34.0 cents per pound which is a 10 percent increase from 1988 and a 21 percent increase from 1987. Peach production revenue in Ohio sustained a 46 percent increase from 1988 and an 8 percent increase from 1987.

Grape production in Ohio totaled 8,000 tons which dipped 10 percent below last year's production of 8,900 tons and 20 percent below 1987 production figures. Bearing acres increased slightly, however yield per acre was 4.00 tons per acre, down 14 percent from 1988. Over the past 3 years, grapes grown for fresh market ranged from 2-3 percent of utilized production, whereas most of the crop is used for processing purposes.

JULY



AUGUST



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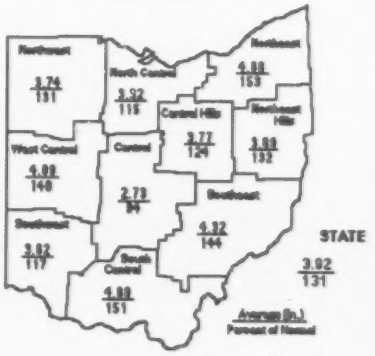

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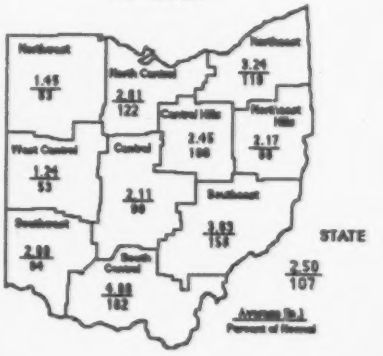

ANNUAL SUMMARY: CROP PRODUCTION AND VALUE
OHIO 1987 - 1989, U.S. 1989 1/

Crop	Ohio				U.S.	Ohio			U.S.	Unit 8/
	Acres planted	Acres harvested				Yield per acre				
	1989	1987	1988	1989	1989	1987	1988	1989	1989	
	Thou.	Thousand acres								
All Corn	3,150									
Corn for Grain		3,100	3,000	2,900	64,781	120.0	85.0	118.0	116.2	Bu.
Corn for Silage		160	250	240	6,606	16.0	10.5	14.0	13.1	Ton
Winter Wheat	1,260	850	920	1,230	41,469	58.0	50.0	51.0	35.1	Bu.
All Wheat	1,260	850	920	1,230	62,149	58.0	50.0	51.0	32.8	Bu.
Soybeans for Beans	4,000	3,900	3,700	3,980	59,388	37.0	27.0	32.0	32.4	Bu.
Oats	300	250	200	250	6,874	70.0	45.0	63.0	54.4	Bu.
Rye	40	5	5	5	479	36.0	37.0	31.0	28.1	Bu.
Potatoes	8.5	9.3	8.7	7.9	1281.6	230	195	185	289	Cwt.
Sugar Beets	13.6	16.2	14.7	11.9	1305.3	16.6	15.9	16.7	19.6	Ton
Tobacco										
Miami V.(41-44)		0.05	0.02	9/	5.5	1,440	1,400	9/	1,950	Lb.
Burley (31)		7.30	7.80	9.1	244.4	1,640	1,855	1,750	1,975	Lb.
Total all types		7.35	7.82	9.1	679.6	1,639	1,854	1,750	2,016	Lb.
All Hay		1,400	1,625	1,625	63,395	3.06	2.18	2.80	2.29	Ton
Alfalfa		710	725	725	25,939	3.70	2.90	3.30	2.98	Ton
All Other Hay		690	900	900	37,456	2.40	1.60	2.40	1.82	Ton
Strawberries	1.2	1.4	1.3	1.2	45.0	52	56	46	246	Cwt.
Apples - Comm'l 4/		10.1	9.9	10.0	473.2	14,900	9,600	12,500	21,100	Lb.
Peaches 4/		1.0	0.9	1.0	183.8	9,000	6,670	8,000	12,700	Lb.
Grapes 4/		1.9	1.9	2.0	754.9	5.26	4.68	4.0	7.81	Ton
Sweet Corn	11.5	16.0	10.5	10.7	175.7	80	55	85	90	Cwt.
Celery	0.45	0.45	0.35	0.40	35.0	480	400	465	580	Cwt.
Lettuce	1.5	1.0	1.4	1.4	254.4	130	120	120	304	Cwt.
Onions 5/	0.5	0.47	0.55	0.49	133.3	295	300	385	358	Cwt.
Tomatoes (fresh)	2.8	2.7	2.2	2.7	141.9	155	125	145	256	Cwt.
Total Fresh Market 6/	17.95	22.32	16.10	16.89	1,151.0	-	-	-	-	Cwt.
Tomatoes (proc.)	17.7	16.0	17.7	17.5	320.9	23.00	20.30	22.36	29.56	Ton
Cucumbers (proc.	4.1	4.5	3.9	3.7	124.2	10.4	9.3	10.62	5.18	Ton
Total Processing 7/	22.1	20.77	21.84	21.40	1,475.0	-	-	-		Ton

1/Data for the United States, where applicable, include all seasonal groups and are rounded to conserve space.
2/Price per unit for Ohio and U.S. grain and hay crops obtained from Crop Values, January 1990. Revisions available January 1991.
3/Not available at time of publication
4/Utilized production.

ANNUAL SUMMARY: CROP PRODUCTION AND VALUE
OHIO 1987 - 1989, U.S. 1989 1/

Ohio			U.S.	Ohio		U.S.	Ohio		U.S.
Production				Price per unit 2/			Value of production		
1987	1988	1989	1989	1988	1989	1989	1988	1989	1989
Thousands				Dollars			Thousand dollars		
372,000	255,000	342,200	7,527,152	2.61	2.35	2.25	665,550	804,170	17.019,722
2,560	2,625	3,360	86,243	-	-	-	-	-	-
49,300	46,000	62,730	1,453,842	3.73	3.80	3.88	171,580	238,374	5,583,355
49,300	46,000	62,730	2,035,818	3.73	3.80	3.82	171,580	238,374	7,742,176
144,300	99,900	127,360	1,926,806	7.54	5.60	5.55	753,246	713,216	10,621,536
17,500	9,000	15,750	373,778	2.61	1.45	1.50	23,490	22,838	557,486
180	185	155	13,482	4.00	3.50	2.05	740	543	27,652
2,254	1,697	1,462	370,344	6.90	7.50	6.85	11,709	10,965	2,523,904
269	234	199	25,553	35.20	3/	3/	8,237	3/	3/
72	28	9/	11,728	1.040	9/	1.270	29	9/	13,621
11,972	14,469	15,925	525,732	1.599	1.673	1.672	23,136	26,643	806,998
12,044	14,497	15,925	1,414,179	1.598	1.673	1.708	23,165	26,643	2,339,549
4,283	3,543	4,553	145,445	117.00	119.00	87.50	414,531	541,807	11,778,477
2,627	2,103	2,393	77,200	-	-	-	-	-	-
1,656	1,440	2,160	68,237	-	-	-	-	-	-
73	73	55	11,079	69.00	80.00	46.60	5,037	4,400	516,810
150,000	95,000	125,000	9,945,800	0.177	0.176	0.105	16,785	22,000	1,048,925
9,000	6,000	8,000	2,210,400	0.310	0.340	0.163	1,860	2,720	360,377
10.0	8.9	8.0	5,895.9	264.00	266.00	290.00	2,349	2,129	1,711,710
1,280	578	910	15,795	11.60	14.10	16.70	6,705	12,831	264,527
216	140	186	20,321	13.50	11.20	13.70	1,890	2,083	277,486
130	168	168	74,707	14.20	28.20	13.60	2,386	4,738	1,014,179
139	165	189	47,794	16.00	14.70	10.70	2,368	2,470	456,267
419	275	392	36,391	21.40	36.90	31.80	5,885	14,465	1,155,791
2,558	1,585	2,331	254,982	-	-	-	19,950	37,905	4,208,621
368.0	359.3	391.3	9,484.5	71.60	77.20	67.50	25,727	30,208	640,113
46.8	36.3	39.3	642.7	198.00	196.00	204.00	7,181	7,701	131,082
415.3	396.0	431.1	14,438.3	-	-	-	32,970	37,973	1,242,443

5/When computing Ohio crop values, 20,000 cwt., 17,000 cwt., and 21,000 cwt. were shrinkages in 1987, 1988, and 1989. U.S. shrinakge in 1989 was cwt. Value of crop based on sales to December 1, 1989.
6/Includes processing totals of dual usage crops and crops not published seperately.
7/Processing crops price per unit includes all payments to the growers, including the cost of materials and includes minor crop acreages not published separately.
8/For yield and production.
9/Estimates discontinued in 1989 because of limited acreage.

OHIO CROP RECORDS:
ACREAGE, YIELD AND PRODUCTION

Crop	Dates series began	Record 1/	Harv. acreage		Yield		Total Prod.		Unit
			Acres	Year	Yield	Year	Production	Year	
			Thou.				Thou.		
Corn for grain	1919	High	4,030	1985	128.0	1986	511,810	1985	Bu.
		Low	2,537	1961	27.5	1930	75,598	1924	Bu.
Corn for silage	1919	High	285	1981	17.0	1987	4,000	1982	Ton.
		Low	106	1935	5.4	1930	823	1933	Ton.
Soybeans for beans	1924	High	4,080	1979	41.5	1985	160,605	1985	Bu.
		Low	17	1925	11.5	1926	207	1926	Bu.
Wheat	1866	High	3,209	1899	62.0	1985	72,380	1977	Bu.
		Low	800	1987	6.0	1900	9,000	1866	Bu.
Oats	1866	High	2,374	1928	85.0	1985	92,400	1912	Bu.
		Low	160	1986	20.0	1890	9,000	1988	Bu.
Rye	1866	High	200	1913	43.0	1985	2,700	1913	Bu.
		Low	4	1985	10.0	1896	150	1981	Bu.
Alfalfa hay	1919	High	1,052	1955	4.00	1985	2,800	1985	Ton
		Low	93	1920	1.30	1930	188	1919	Ton
Other hay	1964	High	1,080	1968	2.40	1989	2,160	1989	Ton
		Low	725	1987	1.49	1965	1,328	1965	Ton
All hay	1866	High	3,553	1908	3.17	1985	4,898	1916	Ton
		Low	1,260	1983	0.60	1895	1,755	1895	Ton
Apples	1934	High					7,886	1937	Bu.
		Low					780	1945	Bu.2/
Peaches	1899	High					3,800	1901	Bu.
		Low					15	1982	Bu.3/
Grapes 4/	1909	High					34.4	1935	Ton
		Low					4.9	1945	Ton
Potatoes-total	1866	High	225.0	1895	270	1985	12,269	1909	Cwt.
		Low	7.9	1989	27	1881	1,462	1989	Cwt.
Sugar beets 5/	1924	High	51.0	1938	21.7	1971	896	1971	Ton
		Low	9.5	1931	5.8	1937	72	1943	Ton
Burley tobacco	1919	High	25.0	1919	2,680	1970	28,350	1982	Lb.
		Low	6.7	1971	715	1935	6,435	1935	Lb.
All tobacco	1866	High	106	1909	2,496	1970	94,575	1918	Lb.
		Low	7.35	1987	620	1875	12,044	1987	Lb.

1/In case of ties, most recent year designated as record year. 2/42 lbs. 3/48 lbs.
4/Utilized production. 5/No acres contracted in 1982.

OHIO AGRICULTURAL STATISTICS DISTRICTS

OHIO COUNTY ESTIMATES, 1988 - 1989
NUMBER OF FARMS, LAND IN FARMS, AVERAGE SIZE OF FARM

COUNTY	NUMBER OF FARMS 1/		AVERAGE SIZE FARM		LAND IN FARMS	
	1988	1989	1988	1989	1988	1989
	Number		Acres		Acres	
ADAMS	1,510	1,550	148	146	223,000	227,000
ALLEN	1,230	1,260	170	170	209,000	214,000
ASHLAND	1,160	1,180	158	157	183,000	185,000
ASHTABULA	1,270	1,300	149	148	189,000	192,000
ATHENS	600	620	155	152	93,000	94,000
AUGLAIZE	1,200	1,230	190	189	228,000	232,000
BELMONT	720	730	176	175	127,000	128,000
BROWN	1,720	1,760	130	128	223,000	226,000
BUTLER	1,080	1,110	153	150	165,000	167,000
CARROLL	750	770	161	158	121,000	122,000
CHAMPAIGN	1,010	1,040	227	223	229,000	232,000
CLARK	870	890	229	227	199,000	202,000
CLERMONT	1,020	1,040	116	115	118,000	120,000
CLINTON	930	950	252	251	234,000	238,000
COLUMBIANA	1,170	1,200	138	137	161,000	164,000
COSHOCTON	950	970	189	187	180,000	181,000
CRAWFORD	940	960	248	247	233,000	237,000
CUYAHOGA	170	170	35	35	6,000	6,000
DARKE	2,210	2,270	164	163	362,000	369,000
DEFIANCE	1,060	1,080	205	201	217,000	217,000
DELAWARE	860	880	210	208	181,000	183,000
ERIE	520	530	179	177	93,000	94,000
FAIRFIELD	1,300	1,330	171	169	222,000	225,000
FAYETTE	680	690	384	388	261,000	268,000
FRANKLIN	620	640	198	191	123,000	122,000
FULTON	1,120	1,140	201	200	225,000	228,000
GALLIA	950	970	125	124	119,000	120,000
GEAUGA	750	770	99	96	74,000	74,000
GREENE	970	990	213	214	207,000	212,000
GUERNSEY	920	950	154	151	142,000	143,000
HAMILTON	380	390	126	123	48,000	48,000
HANCOCK	1,300	1,330	235	234	306,000	311,000
HARDIN	1,110	1,130	248	248	275,000	280,000
HARRISON	500	510	232	229	116,000	117,000
HENRY	1,210	1,230	213	215	258,000	264,000
HIGHLAND	1,410	1,450	184	181	259,000	263,000
HOCKING	440	450	150	149	66,000	67,000
HOLMES	1,630	1,670	118	116	192,000	194,000
HURON	1,000	1,020	242	237	242,000	242,000
JACKSON	450	460	193	193	87,000	89,000
JEFFERSON	470	480	168	167	79,000	80,000
KNOX	1,270	1,300	183	178	232,000	232,000
LAKE	290	290	69	69	20,000	20,000
LAWRENCE	590	600	110	108	65,000	65,000
LICKING	1,500	1,550	167	163	250,000	252,000
LOGAN	1,050	1,070	226	225	237,000	241,000
LORAIN	1,050	1,080	139	137	146,000	148,000
LUCAS	520	530	158	155	82,000	82,000
MADISON	790	800	346	346	273,000	277,000
MAHONING	720	730	119	121	86,000	88,000
MARION	690	710	335	331	231,000	235,000
MEDINA	1,080	1,110	110	108	119,000	120,000

OHIO COUNTY ESTIMATES, 1988 - 1989
NUMBER OF FARMS, LAND IN FARMS, AVERAGE SIZE OF FARM

COUNTY	NUMBER OF FARMS 1/		AVERAGE SIZE FARM		LAND IN FARMS	
	1988	1989	1988	1989	1988	1989
	Number		Acres		Acres	
MEIGS	560	580	154	147	86,000	85,000
MERCER	1,680	1,730	175	173	294,000	300,000
MIAMI	1,220	1,240	180	182	220,000	226,000
MONROE	770	780	153	153	118,000	119,000
MONTGOMERY	1,010	1,030	121	120	122,000	124,000
MORGAN	630	650	184	182	116,000	118,000
MORROW	930	950	187	186	174,000	177,000
MUSKINGUM	1,170	1,200	170	167	199,000	200,000
NOBLE	610	620	184	182	112,000	113,000
OTTAWA	620	630	176	175	109,000	110,000
PAULDING	770	790	306	304	236,000	240,000
PERRY	690	700	157	157	108,000	110,000
PICKAWAY	840	860	318	313	267,000	269,000
PIKE	480	490	208	206	100,000	101,000
PORTAGE	890	910	116	114	103,000	104,000
PREBLE	1,270	1,300	176	176	224,000	229,000
PUTNAM	1,700	1,740	181	178	308,000	310,000
RICHLAND	1,090	1,120	157	154	171,000	172,000
ROSS	870	890	307	300	267,000	267,000
SANDUSKY	1,010	1,030	218	217	220,000	224,000
SCIOTO	710	720	159	161	113,000	116,000
SENECA	1,500	1,540	207	202	311,000	311,000
SHELBY	1,200	1,220	189	189	227,000	230,000
STARK	1,400	1,440	113	111	158,000	160,000
SUMMIT	320	330	72	70	23,000	23,000
TRUMBULL	1,020	1,040	124	123	126,000	128,000
TUSCARAWAS	1,100	1,130	143	141	157,000	159,000
UNION	970	1,000	248	244	241,000	244,000
VAN WERT	990	1,020	269	267	266,000	272,000
VINTON	230	240	226	221	52,000	53,000
WARREN	980	1,010	144	140	141,000	141,000
WASHINGTON	1,020	1,050	147	145	150,000	152,000
WAYNE	1,860	1,900	145	144	270,000	274,000
WILLIAMS	1,030	1,060	227	225	234,000	239,000
WOOD	1,370	1,400	243	239	333,000	335,000
WYANDOT	780	800	292	285	228,000	228,000
STATE	85,000	87,000	184	182	15,600,000	15,800,000

NUMBER OF FARMS, AVERAGE SIZE FARM, AND LAND IN FARMS, OHIO AND UNITED STATES, 1987-89

Year	Number of farms 1/		Average size farm		Land in farm	
	Ohio	U.S.	Ohio	U.S.	Ohio	U.S.
	Number		Acres		Thousand acres	
1987	84,000	2,212,960	186	451	15,600	998,923
1988	85,000	2,197,140	184	453	15,600	994,543
1989	87,000	2,172,920	182	456	15,800	991,473

1/ A farm is defined as a place with annual sales of agricultural commodities of $1,000 or more.

OHIO COUNTY ESTIMATES, 1988 - 1989
CORN FOR GRAIN: ACRES, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
ADAMS	17,700	17,600	61.2	106.7	1,083,100	1,878,700
ALLEN	47,700	51,900	83.7	135.0	3,991,700	7,008,400
ASHLAND	32,500	33,600	75.1	92.1	2,440,500	3,094,400
ASHTABULA	14,900	13,000	61.8	83.4	921,200	1,083,700
ATHENS	2,700	2,300	57.7	92.3	155,900	212,400
AUGLAIZE	47,500	49,200	90.4	127.4	4,291,800	6,266,900
BELMONT	2,500	2,400	50.6	80.8	126,400	194,000
BROWN	31,100	22,700	71.7	116.2	2,229,700	2,637,300
BUTLER	37,300	33,600	77.9	111.6	2,906,500	3,751,100
CARROLL	9,600	9,700	61.6	96.5	591,300	936,200
CHAMPAIGN	76,100	84,300	90.0	130.6	6,852,600	11,005,700
CLARK	58,200	63,500	105.0	117.2	6,113,100	7,445,000
CLERMONT	14,000	11,400	70.5	123.9	986,700	1,412,400
CLINTON	80,400	71,300	100.0	127.7	8,038,200	9,107,200
COLUMBIANA	19,300	17,700	70.6	83.3	1,362,400	1,473,700
COSHOCTON	25,400	26,900	102.5	115.0	2,604,600	3,093,600
CRAWFORD	56,000	61,600	86.4	125.5	4,838,900	7,732,900
CUYAHOGA	*	*	*	*	*	*
DARKE	89,300	91,800	75.8	123.7	6,764,800	11,357,500
DEFIANCE	26,700	28,100	63.8	116.3	1,702,400	3,268,600
DELAWARE	43,700	39,100	88.0	107.9	3,844,900	4,219,900
ERIE	26,900	29,700	88.9	125.4	2,391,400	3,725,700
FAIRFIELD	60,000	55,200	97.6	101.9	5,858,500	5,624,600
FAYETTE	75,300	77,500	101.1	126.6	7,612,800	9,808,800
FRANKLIN	31,300	28,100	93.2	112.8	2,917,400	3,169,100
FULTON	75,300	85,800	99.6	138.9	7,501,600	11,921,500
GALLIA	3,100	3,500	65.4	125.6	202,600	439,600
GEAUGA	5,000	4,400	59.8	102.3	299,100	450,200
GREENE	66,200	64,800	97.7	119.8	6,470,000	7,765,700
GUERNSEY	3,900	3,800	71.2	73.1	277,800	277,700
HAMILTON	4,400	3,900	79.4	127.7	349,300	498,100
HANCOCK	63,700	64,300	76.4	131.6	4,868,800	8,463,200
HARDIN	61,000	49,300	84.4	120.7	5,148,700	5,948,600
HARRISON	3,900	4,500	52.8	94.4	206,100	425,000
HENRY	58,000	60,600	98.8	123.1	5,728,800	7,462,700
HIGHLAND	64,600	60,200	93.7	129.5	6,056,200	7,797,300
HOCKING	5,600	4,600	78.2	107.8	438,100	496,000
HOLMES	19,500	21,300	80.1	92.1	1,561,000	1,961,600
HURON	53,700	44,200	83.9	117.0	4,504,300	5,171,900
JACKSON	6,300	4,200	81.6	107.0	514,000	449,300
JEFFERSON	2,600	3,300	50.0	89.1	130,000	294,100
KNOX	43,800	49,600	87.5	106.6	3,831,600	5,284,900
LAKE	*	*	*	*	*	*
LAWRENCE	1,600	1,800	68.6	84.8	109,800	152,600
LICKING	47,300	44,400	97.1	99.3	4,590,900	4,407,800
LOGAN	56,900	51,500	83.0	126.3	4,721,400	6,505,000
LORAIN	21,700	18,900	69.3	80.4	1,504,100	1,519,600
LUCAS	21,100	22,000	97.1	126.9	2,049,500	2,792,400
MADISON	72,700	66,500	102.1	121.3	7,421,300	8,064,000

OHIO COUNTY ESTIMATES, 1988 - 1989
CORN FOR GRAIN: ACRES, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
MAHONING	9,500	8,500	68.9	88.2	655,000	749,600
MARION	54,600	45,700	87.3	110.4	4,769,100	5,047,300
MEDINA	19,400	14,400	72.0	97.5	1,395,900	1,403,900
MEIGS	3,000	3,300	46.0	97.4	138,000	321,400
MERCER	63,800	61,200	81.8	127.2	5,215,800	7,785,600
MIAMI	60,400	62,800	77.0	116.6	4,650,500	7,322,600
MONROE	1,800	1,700	50.8	103.4	91,400	175,800
MONTGOMERY	30,900	29,600	77.0	112.3	2,377,800	3,323,500
MORGAN	4,200	3,900	69.0	105.9	289,600	412,900
MORROW	36,600	35,900	90.4	97.1	3,307,300	3,487,300
MUSKINGUM	18,500	16,200	89.1	105.8	1,647,900	1,714,300
NOBLE	1,500	1,500	73.4	72.1	110,100	108,100
OTTAWA	15,600	10,500	70.3	107.8	1,097,000	1,132,200
PAULDING	45,400	26,700	81.2	111.0	3,685,000	2,962,500
PERRY	17,000	17,000	97.4	100.9	1,655,700	1,715,800
PICKAWAY	80,800	76,800	86.7	117.6	7,001,400	9,028,100
PIKE	13,200	10,900	65.3	84.5	861,600	921,200
PORTAGE	17,000	14,600	71.4	96.7	1,213,200	1,411,900
PREBLE	70,800	74,900	70.6	122.0	4,996,500	9,139,700
PUTNAM	53,700	56,800	85.4	134.7	4,587,100	7,651,400
RICHLAND	31,700	35,900	82.0	116.3	2,598,000	4,174,300
ROSS	47,400	44,100	79.6	116.6	3,774,300	5,141,300
SANDUSKY	48,700	47,700	85.8	119.5	4,176,600	5,699,900
SCIOTO	7,800	6,900	77.5	113.8	604,600	785,000
SENECA	64,500	62,700	71.8	117.5	4,632,700	7,366,900
SHELBY	45,300	47,900	89.6	128.1	4,057,700	6,135,900
STARK	27,800	24,200	69.6	99.1	1,934,700	2,397,500
SUMMIT	2,100	2,100	71.8	82.0	150,700	172,300
TRUMBULL	16,100	13,500	82.0	103.3	1,320,500	1,394,800
TUSCARAWA	17,200	15,900	82.1	105.8	1,411,800	1,682,600
UNION	50,900	39,800	85.7	111.6	4,363,300	4,442,400
VAN WERT	63,500	68,800	97.6	135.4	6,199,500	9,314,000
VINTON	1,600	1,100	50.9	96.7	81,400	106,400
WARREN	35,000	25,000	82.8	117.6	2,898,800	2,941,000
WASHINGTON	7,700	8,200	47.0	108.2	361,800	887,100
WAYNE	49,500	49,300	70.1	94.3	3,469,600	4,650,700
WILLIAMS	46,100	45,600	67.7	113.9	3,123,000	5,195,900
WOOD	80,800	72,900	86.2	116.6	6,963,700	8,498,300
WYANDOT	49,000	54,300	80.0	132.8	3,921,900	7,210,700
OTHER COUNTIES	1,600	1,600	61.1	82.1	97,700	131,300
STATE	3,000,000	2,900,000	85.0	118.0	255,000,000	342,200,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of counties with less than 1,000 acres.

OHIO COUNTY ESTIMATES, 1988 - 1989
SOYBEANS: ACREAGE, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
ADAMS	6,400	6,800	23.5	31.3	150,700	212,700
ALLEN	78,700	85,200	23.5	35.8	1,849,000	3,053,000
ASHLAND	23,000	23,500	30.2	23.9	695,300	560,800
ASHTABULA	9,700	7,300	25.4	26.8	245,900	195,700
ATHENS	*	*	*	*	*	*
AUGLAIZE	78,600	81,300	26.4	34.2	2,073,200	2,776,600
BELMONT	*	*	*	*	*	*
BROWN	43,100	47,900	28.2	31.5	1,213,900	1,507,100
BUTLER	27,500	29,000	27.6	35.3	758,400	1,023,700
CARROLL	2,000	2,100	35.3	37.0	70,600	77,800
CHAMPAIGN	60,000	63,900	31.1	36.1	1,864,500	2,305,700
CLARK	58,200	61,500	33.1	31.0	1,929,100	1,907,400
CLERMONT	33,800	36,400	26.3	29.8	888,200	1,086,400
CLINTON	67,800	80,800	34.8	35.8	2,357,400	2,889,400
COLUMBIANA	2,000	2,800	33.3	22.2	66,600	62,200
COSHOCTON	1,700	2,400	34.1	30.0	57,900	71,900
CRAWFORD	86,300	89,800	25.5	32.6	2,203,900	2,924,000
CUYAHOGA	*	*	*	*	*	*
DARKE	129,500	134,600	23.9	36.2	3,091,900	4,871,000
DEFIANCE	77,500	84,400	17.9	28.2	1,384,900	2,377,500
DELAWARE	67,600	73,400	30.0	28.9	2,030,400	2,120,600
ERIE	27,800	28,100	29.7	35.1	826,600	985,700
FAIRFIELD	35,300	39,600	33.6	31.9	1,187,100	1,263,300
FAYETTE	90,100	100,500	32.8	34.7	2,956,200	3,489,300
FRANKLIN	42,300	44,300	30.8	30.3	1,301,300	1,344,400
FULTON	76,100	84,400	30.8	38.9	2,342,000	3,279,300
GALLIA	*	*	*	*	*	*
GEAUGA	*	*	*	*	*	*
GREENE	55,600	62,300	33.4	34.8	1,857,300	2,165,400
GUERNSEY	*	*	*	*	*	*
HAMILTON	4,800	4,900	32.1	35.9	154,000	176,000
HANCOCK	119,900	129,900	20.1	32.4	2,406,700	4,214,100
HARDIN	98,200	107,800	25.1	31.5	2,461,000	3,400,700
HARRISON	*	*	*	*	*	*
HENRY	94,800	103,100	27.3	32.4	2,588,100	3,342,800
HIGHLAND	57,400	65,900	33.6	36.5	1,927,200	2,407,500
HOCKING	1,500	1,900	36.6	36.2	54,900	68,700
HOLMES	1,900	1,800	31.4	28.8	59,600	51,900
HURON	83,200	86,300	25.6	29.5	2,127,700	2,544,000
JACKSON	1,100	*	29.5	*	32,500	*
JEFFERSON	*	*	*	*	*	*
KNOX	25,700	29,100	32.0	27.8	822,700	809,800
LAKE	*	*	*	*	*	*
LAWRENCE	*	*	*	*	*	*
LICKING	45,800	47,700	33.5	28.3	1,533,200	1,352,100
LOGAN	67,100	72,800	27.0	29.0	1,810,400	2,112,600
LORAIN	50,100	50,000	26.4	26.5	1,321,200	1,326,700
LUCAS	33,800	36,200	28.3	26.6	956,300	964,600
MADISON	113,100	126,600	34.4	32.5	3,890,500	4,113,800

OHIO COUNTY ESTIMATES, 1988 - 1989
SOYBEANS: ACREAGE, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
MAHONING	3,000	3,200	32.2	26.3	96,500	84,200
MARION	100,900	104,400	27.6	29.9	2,788,000	3,122,700
MEDINA	18,400	17,900	28.7	22.3	528,300	399,000
MEIGS	*	*	*	*	*	*
MERCER	81,800	90,500	22.8	35.9	1,868,000	3,251,200
MIAMI	72,400	74,500	25.9	33.2	1,875,400	2,469,700
MONROE	*	*	*	*	*	*
MONTGOMERY	40,400	43,000	26.6	35.5	1,074,600	1,524,700
MORGAN	*	*	*	*	*	*
MORROW	53,300	56,500	26.7	28.4	1,423,800	1,602,000
MUSKINGUM	1,400	1,500	33.5	39.7	46,900	59,500
NOBLE	*	*	*	*	*	*
OTTAWA	50,800	53,300	22.8	24.1	1,158,000	1,283,700
PAULDING	87,400	97,900	18.9	29.6	1,647,700	2,893,500
PERRY	5,200	5,000	33.7	30.1	175,200	150,400
PICKAWAY	89,500	94,100	31.4	34.9	2,814,100	3,284,100
PIKE	8,000	7,300	28.9	41.6	231,100	303,800
PORTAGE	8,300	8,400	31.3	29.7	260,100	249,600
PREBLE	62,600	68,900	26.3	37.4	1,648,100	2,577,200
PUTNAM	119,600	130,800	23.9	32.6	2,860,100	4,265,700
RICHLAND	31,800	30,700	28.7	27.0	914,000	828,600
ROSS	41,400	47,100	31.7	36.2	1,311,000	1,707,000
SANDUSKY	86,100	93,700	23.4	27.0	2,016,000	2,532,600
SCIOTO	8,600	8,400	25.1	40.2	215,800	337,900
SENECA	119,200	128,700	21.5	28.1	2,557,800	3,610,200
SHELBY	74,000	73,300	26.6	33.1	1,966,100	2,427,700
STARK	10,900	9,700	31.7	29.3	345,200	284,600
SUMMIT	1,200	1,000	33.5	32.5	40,200	32,500
TRUMBULL	10,800	11,400	33.6	30.3	363,000	345,700
TUSCARAWA	3,700	3,400	32.9	29.6	121,600	100,700
UNION	95,800	103,300	27.6	29.5	2,647,100	3,046,600
VAN WERT	101,000	110,300	25.3	37.4	2,556,800	4,128,000
VINTON	*	*	*	*	*	*
WARREN	35,400	41,800	32.9	35.0	1,165,700	1,461,300
WASHINGTON	*	1,300	*	30.5	*	39,600
WAYNE	17,700	18,000	33.6	30.9	595,000	556,600
WILLIAMS	67,800	76,500	25.6	28.8	1,735,900	2,199,900
WOOD	118,200	129,700	27.8	26.1	3,285,700	3,381,800
WYANDOT	86,900	90,800	20.8	34.7	1,808,600	3,154,700
OTHER COUNTIES	7,500	7,400	28.0	30.6	210,300	226,800
STATES	3,700,000	3,980,000	27.0	32.0	99,900,000	127,360,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of counties with less than 1,000 acres.

OHIO COUNTY ESTIMATES, 1988 - 1989
ALL WHEAT: ACREAGE, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
ADAMS	4,700	5,500	46.0	39.9	216,200	219,400
ALLEN	21,700	28,600	48.4	55.0	1,050,700	1,574,400
ASHLAND	6,700	8,900	45.0	41.4	301,800	368,100
ASHTABULA	*	2,800	*	37.9	*	106,200
ATHENS	*	*	*	*	*	*
AUGLAIZE	23,700	34,300	51.2	51.7	1,213,300	1,774,000
BELMONT	*	*	*	*	*	*
BROWN	5,200	6,600	53.1	37.8	276,000	249,500
BUTLER	7,700	9,400	54.0	55.3	415,500	519,700
CARROLL	1,200	1,500	44.6	42.0	53,500	63,000
CHAMPAIGN	10,700	14,500	54.2	55.2	580,000	799,700
CLARK	7,100	11,300	58.8	52.5	417,600	593,300
CLERMONT	*	1,800	*	44.2	*	79,600
CLINTON	10,100	14,500	61.3	48.8	619,300	707,500
COLUMBIANA	4,300	6,300	50.3	46.2	216,100	291,200
COSHOCTON	1,800	2,200	47.6	39.8	85,700	87,500
CRAWFORD	23,900	33,500	53.4	54.4	1,276,800	1,822,900
CUYAHOGA	*	*	*	*	*	*
DARKE	25,400	38,200	52.8	56.3	1,342,200	2,150,400
DEFIANCE	33,000	39,100	40.9	46.6	1,348,200	1,822,300
DELAWARE	11,900	15,700	46.7	49.7	555,700	780,200
ERIE	6,000	8,800	52.5	55.9	314,800	491,700
FAIRFIELD	11,700	13,900	54.5	38.3	637,400	531,700
FAYETTE	11,700	16,300	58.9	44.1	688,600	719,300
FRANKLIN	6,100	7,400	53.5	45.1	326,400	333,500
FULTON	12,700	17,000	52.5	55.0	666,200	935,000
GALLIA	*	*	*	*	*	*
GEAUGA	*	*	*	*	*	*
GREENE	7,600	10,600	55.1	47.6	418,600	504,400
GUERNSEY	*	*	*	*	*	*
HAMILTON	*	1,100	*	58.7	*	64,600
HANCOCK	39,000	50,200	49.7	55.4	1,939,500	2,782,200
HARDIN	27,900	39,400	47.4	49.4	1,322,300	1,947,000
HARRISON	*	*	*	*	*	*
HENRY	29,000	39,500	51.6	60.3	1,495,900	2,380,800
HIGHLAND	12,800	15,200	54.6	45.3	698,800	688,100
HOCKING	*	1,100	*	45.0	*	49,500
HOLMES	2,100	2,500	46.1	39.3	96,900	98,300
HURON	18,200	26,700	50.5	51.7	920,000	1,380,900
JACKSON	*	1,000	*	36.2	*	36,200
JEFFERSON	*	*	*	*	*	*
KNOX	6,600	8,800	46.7	36.5	307,900	320,800
LAKE	*	*	*	*	*	*
LAWRENCE	*	*	*	*	*	*
LICKING	8,500	10,200	52.5	36.5	446,500	371,800
LOGAN	15,400	22,300	49.1	47.9	756,500	1,067,400
LORAIN	7,900	10,700	48.0	43.6	379,100	467,000
LUCAS	5,900	8,000	49.9	52.0	294,600	416,000
MADISON	11,000	13,800	58.9	54.2	647,400	747,700
MAHONING	2,600	3,800	49.8	42.7	129,400	162,200
MARION	19,000	25,000	50.6	51.5	961,100	1,286,400
MEDINA	4,400	5,400	47.8	34.4	210,100	185,800

OHIO COUNTY ESTIMATES, 1988 - 1989
ALL WHEAT: ACREAGE, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
MEIGS	*	*	*	*	*	*
MERCER	27,300	38,600	52.2	55.4	1,425,000	2,139,700
MIAMI	12,900	17,600	59.2	51.3	764,000	903,400
MONROE	*	*	*	*	*	*
MONTGOMERY	5,800	8,200	56.2	53.8	325,900	441,100
MORGAN	*	*	*	*	*	*
MORROW	10,400	14,300	46.2	42.9	480,600	613,100
MUSKINGUM	1,800	2,000	54.9	40.0	98,800	79,900
NOBLE	*	*	*	*	*	*
OTTAWA	12,300	16,700	48.5	50.9	596,600	849,300
PAULDING	39,400	48,500	41.4	58.7	1,629,600	2,844,700
PERRY	1,900	2,300	48.5	32.0	92,200	73,600
PICKAWAY	22,400	30,000	57.9	47.0	1,296,600	1,409,400
PIKE	1,900	2,600	52.1	31.5	98,900	81,900
PORTAGE	2,700	3,700	51.1	37.4	138,100	138,500
PREBLE	11,000	15,800	53.4	52.4	587,300	828,100
PUTNAM	35,300	48,700	43.9	55.9	1,549,800	2,722,300
RICHLAND	7,400	10,400	45.6	47.1	337,300	489,800
ROSS	17,500	22,300	54.2	45.5	948,300	1,014,000
SANDUSKY	14,000	20,100	49.5	53.2	693,000	1,068,900
SCIOTO	1,300	1,800	37.4	47.6	48,600	85,600
SENECA	31,700	42,500	45.5	50.1	1,443,600	2,130,500
SHELBY	19,600	25,700	53.2	50.0	1,042,800	1,284,600
STARK	5,500	7,100	52.2	40.8	287,000	289,700
SUMMIT	*	*	*	*	*	*
TRUMBULL	1,500	3,100	52.7	41.4	79,000	128,400
TUSCARAWAS	1,600	2,100	47.6	42.7	76,100	89,600
UNION	17,500	22,400	49.1	45.3	859,700	1,014,400
VAN WERT	27,800	36,400	49.9	60.9	1,387,300	2,215,000
VINTON	*	*	*	*	*	*
WARREN	4,200	6,700	59.3	49.0	249,200	328,200
WASHINGTON	1,700	2,100	55.6	36.3	94,500	76,300
WAYNE	8,500	9,800	48.0	43.5	408,300	426,700
WILLIAMS	28,200	34,400	44.7	46.2	1,259,800	1,587,900
WOOD	42,500	57,100	52.5	57.3	2,229,400	3,273,000
WYANDOT	30,100	37,700	47.7	50.2	1,434,500	1,893,000
OTHER COUNTIES	9,100	5,900	45.2	39.4	411,600	232,200
STATE	920,000	1,230,000	50.0	51.0	46,000,000	62,730,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of counties with less than 1,000 acres.

OHIO COUNTY ESTIMATES, 1988 - 1989
OATS FOR GRAIN: ACRES, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
ADAMS	*	*	*	*	*	*
ALLEN	1,900	3,000	48.4	66.1	91,900	198,200
ASHLAND	6,000	7,700	42.4	61.1	254,200	470,800
ASHTABULA	7,100	10,200	41.8	46.6	296,600	474,900
ATHENS	*	*	*	*	*	*
AUGLAIZE	4,000	4,200	47.3	75.7	189,300	318,100
BELMONT	*	1,000	*	52.6		52,600
BROWN	*	*	*	*	*	*
BUTLER	*	*	*	*	*	*
CARROLL	3,000	3,400	42.7	64.5	128,200	219,200
CHAMPAIGN	*	1,900	*	74.7	*	141,900
CLARK	*	1,000	*	71.0	*	71,000
CLERMONT	*	*	*	*	*	*
CLINTON	*	1,000	*	47.5	*	47,500
COLUMBIANA	7,600	9,900	49.9	66.8	379,600	661,500
COSHOCTON	2,300	2,500	45.6	50.6	104,800	126,500
CRAWFORD	3,200	3,900	50.5	74.3	161,600	289,800
CUYAHOGA	*	*	*	*	*	*
DARKE	3,900	4,400	49.5	69.7	193,100	306,600
DEFIANCE	5,200	8,100	38.7	63.8	201,300	516,900
DELAWARE	1,900	2,200	49.5	47.6	94,000	104,700
ERIE	1,100	2,400	51.5	75.7	56,700	181,600
FAIRFIELD	1,500	1,600	54.6	52.4	81,900	83,900
FAYETTE	*	*	*	*	*	*
FRANKLIN	*	*	*	*	*	*
FULTON	*	*	*	*	*	*
GALLIA	*	*	*	*	*	*
GEAUGA	4,000	3,000	40.7	54.1	162,700	162,400
GREENE	*	*	*	*	*	*
GUERNSEY	*	*	*	*	*	*
HAMILTON	*	*	*	*	*	*
HANCOCK	1,400	2,100	41.6	75.6	58,300	158,700
HARDIN	2,800	3,100	36.1	64.9	101,000	201,200
HARRISON	1,400	1,800	45.0	65.5	63,000	117,900
HENRY	2,400	2,400	43.6	71.9	104,600	172,500
HIGHLAND	*	1,000	*	54.2		54,200
HOCKING	*	*	*	*	*	*
HOLMES	7,000	9,800	49.8	64.9	348,300	636,200
HURON	4,500	6,500	42.8	57.3	192,800	372,500
JACKSON	*	*	*	*	*	*
JEFFERSON	*	1,300	*	52.0	*	67,600
KNOX	5,400	6,300	46.9	54.8	253,100	345,400
LAKE	*	*	*	*	*	*
LAWRENCE	*	*	*	*	*	*
LICKING	3,100	3,500	56.5	57.3	175,000	200,600
LOGAN	2,700	3,100	47.4	60.6	128,000	187,800
LORAIN	2,900	4,900	49.0	51.1	142,100	250,200
LUCAS	*	*	*	*	*	*
MADISON	*	1,000	*	74.2	*	74,200
MAHONING	4,700	4,600	52.4	61.3	246,200	282,100
MARION	1,700	1,900	43.1	69.5	73,200	132,100
MEDINA	4,200	4,300	46.1	61.3	193,800	263,500

OHIO COUNTY ESTIMATES, 1988 - 1989
OATS FOR GRAIN: ACRES, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Bu. per acre		Bushels	
MEIGS	*	*	*	*	*	*
MERCER	7,000	9,000	46.5	70.2	325,600	632,200
MIAMI	1,500	1,800	49.1	60.5	73,700	108,900
MONROE	*	*	*	*	*	*
MONTGOMERY	*	*	*	*	*	*
MORGAN	*	*	*	*	*	*
MORROW	3,100	3,500	41.5	52.3	128,500	183,000
MUSKINGUM	1,800	1,800	52.9	47.2	95,200	84,900
NOBLE	*	*	*	*	*	*
OTTAWA	1,000	1,300	44.4	78.5	44,400	102,100
PAULDING	4,900	6,900	38.2	71.2	187,400	491,200
PERRY	*	1,000	*	40.9	*	40,900
PICKAWAY	*	*	*	*	*	*
PIKE	*	*	*	*	*	*
PORTAGE	4,000	5,500	41.8	54.3	167,000	298,700
PREBLE	*	1,000	*	52.4	*	52,400
PUTNAM	3,400	4,200	33.6	77.6	114,200	325,800
RICHLAND	5,800	11,000	37.4	65.9	216,800	725,400
ROSS	*	*	*	*	*	*
SANDUSKY	2,100	2,900	32.2	57.0	67,700	165,400
SCIOTO	*	*	*	*	*	*
SENECA	6,000	8,200	36.4	69.4	218,200	569,000
SHELBY	3,900	4,000	49.9	61.5	194,600	245,900
STARK	7,600	10,100	48.5	63.8	368,400	644,400
SUMMIT	*	*	*	*	*	*
TRUMBULL	5,000	4,400	53.7	61.7	268,700	271,300
TUSCARAWAS	3,100	3,300	54.5	59.0	168,800	194,600
UNION	2,000	2,500	46.1	66.6	92,100	166,600
VAN WERT	2,700	3,600	37.3	73.1	100,600	263,300
VINTON	*	*	*	*	*	*
WARREN	*	*	*	*	*	*
WASHINGTON	*	*	*	*	*	*
WAYNE	12,000	10,700	44.8	65.9	537,600	705,300
WILLIAMS	2,700	4,400	45.7	68.8	123,500	302,500
WOOD	2,500	3,100	32.6	72.0	81,600	223,200
WYANDOT	2,300	3,500	39.0	82.8	89,800	289,800
OTHER COUNTIES	18,700	13,300	46.0	54.0	860,300	718,400
STATE	200,000	250,000	45.0	63.0	9,000,000	15,750,000

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OHIO COUNTY ESTIMATES, 1988 - 1989
ALL HAY: ACREAGE, YIELD AND PRODUCTION

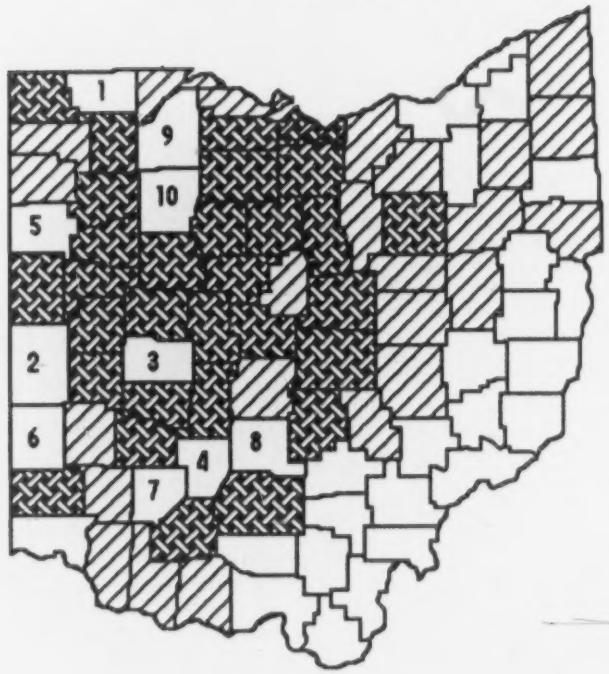
County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Tons per acre		Tons	
ADAMS	35,000	34,600	1.53	2.83	53,400	98,000
ALLEN	7,500	7,000	2.16	3.53	16,200	24,700
ASHLAND	39,000	36,900	2.72	2.99	105,900	110,300
ASHTABULA	44,500	48,900	2.21	2.79	98,400	136,400
ATHENS	24,000	20,400	1.51	2.09	36,200	42,600
AUGLAIZE	16,000	16,400	2.54	3.55	40,600	58,200
BELMONT	40,000	38,200	1.83	2.24	73,200	85,700
BROWN	27,000	24,700	1.57	2.70	42,300	66,800
BUTLER	20,000	21,100	2.12	2.42	42,400	51,000
CARROLL	36,500	36,900	2.08	2.80	75,800	103,400
CHAMPAIGN	11,000	11,800	2.07	3.54	22,800	41,800
CLARK	9,500	9,300	2.16	3.24	20,500	30,100
CLERMONT	11,000	10,900	1.61	2.01	17,700	21,900
CLINTON	6,500	8,600	2.06	3.12	13,400	26,800
COLUMBIANA	43,000	42,600	3.08	2.62	132,500	111,400
COSHOCTON	37,500	38,200	2.25	2.62	84,200	99,900
CRAWFORD	8,500	6,700	2.35	3.69	20,000	24,700
CUYAHOGA	1,500	1,200	2.33	1.58	3,500	1,900
DARKE	22,000	21,100	2.20	3.59	48,300	75,800
DEFIANCE	9,000	6,200	1.64	3.47	14,800	21,500
DELAWARE	12,000	11,400	2.12	2.89	25,400	33,000
ERIE	5,500	5,100	2.76	4.39	15,200	22,400
FAIRFIELD	21,000	21,300	2.28	3.19	47,800	67,900
FAYETTE	9,500	10,100	2.19	2.78	20,800	28,100
FRANKLIN	7,000	6,200	2.61	2.68	18,300	16,600
FULTON	5,500	4,700	2.47	3.79	13,600	17,800
GALLIA	19,500	19,700	1.70	2.76	33,200	54,300
GEAUGA	20,500	20,500	1.93	[illegible]	39,600	49,300
GREENE	10,000	10,900	2.54	[illegible]	25,400	34,900
GUERNSEY	35,500	36,600	2.08	[illegible]	73,700	86,900
HAMILTON	5,000	4,000	2.54	2.60	12,700	10,400
HANCOCK	9,400	5,700	1.67	4.25	15,700	24,200
HARDIN	9,000	8,500	1.99	3.88	17,900	33,000
HARRISON	26,000	26,300	1.58	1.77	41,000	46,500
HENRY	8,000	8,700	1.98	3.57	15,800	31,100
HIGHLAND	23,000	23,100	1.92	2.77	44,100	63,900
HOCKING	8,000	8,900	1.40	2.26	11,200	20,100
HOLMES	53,500	55,900	2.58	2.64	137,800	147,800
HURON	8,500	9,600	2.35	3.02	20,000	29,000
JACKSON	21,000	21,700	1.66	2.24	34,800	48,500
JEFFERSON	19,500	22,000	1.91	2.28	37,300	50,100
KNOX	30,000	33,300	2.66	3.05	79,900	101,600
LAKE	4,500	3,900	1.69	1.77	7,600	6,900
LAWRENCE	8,500	8,600	1.56	1.97	13,300	16,900
LICKING	30,000	32,800	2.38	2.44	71,400	80,000
LOGAN	17,500	17,800	2.20	3.16	38,500	56,300
LORAIN	15,000	15,600	2.39	2.80	35,900	43,700
LUCAS	3,000	1,900	2.57	3.79	7,700	7,200

OHIO COUNTY ESTIMATES, 1988 - 1989
ALL HAY: ACREAGE, YIELD AND PRODUCTION

County	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Tons per acre		Tons	
MADISON	7,500	8,400	2.05	2.99	15,400	25,100
MAHONING	16,500	19,000	2.85	3.16	47,100	60,000
MARION	5,500	4,900	2.18	2.96	12,000	14,500
MEDINA	25,500	27,400	2.32	2.60	59,100	71,300
MEIGS	19,000	18,700	1.41	2.07	26,800	38,700
MERCER	25,000	26,100	2.28	3.85	57,000	100,500
MIAMI	8,000	9,100	2.53	3.67	20,200	33,400
MONROE	23,500	25,800	1.69	2.32	39,800	59,800
MONTGOMERY	9,500	8,600	2.13	2.37	20,200	20,400
MORGAN	24,500	24,300	1.87	2.53	45,900	61,400
MORROW	10,000	12,300	2.05	2.74	20,500	33,700
MUSKINGUM	48,500	48,400	2.25	2.50	109,300	120,900
NOBLE	22,000	23,800	1.61	2.38	35,500	56,600
OTTAWA	8,500	6,100	2.22	3.77	18,900	23,000
PAULDING	7,000	5,500	1.20	2.89	8,400	15,900
PERRY	14,500	18,500	2.08	2.16	30,100	39,900
PICKAWAY	15,000	8,700	1.83	2.66	27,400	23,100
PIKE	15,000	13,200	1.66	1.88	24,900	24,800
PORTAGE	22,000	21,300	2.50	2.93	55,000	62,400
PREBLE	13,000	13,600	2.01	3.04	26,100	41,400
PUTNAM	15,000	12,400	1.85	3.50	27,700	43,400
RICHLAND	25,000	21,400	2.26	2.85	56,600	60,900
ROSS	26,000	20,600	1.72	2.81	44,700	57,800
SANDUSKY	6,000	6,600	2.35	3.42	14,100	22,600
SCIOTO	11,000	13,700	1.87	3.15	20,600	43,100
SENECA	10,000	10,200	2.26	2.83	22,600	28,900
SHELBY	20,000	20,900	2.32	3.61	46,300	75,500
STARK	32,500	36,300	2.98	3.33	96,800	120,900
SUMMIT	5,000	4,500	2.28	1.67	11,400	7,500
TRUMBULL	25,500	27,000	3.07	2.99	78,200	80,700
TUSCARAWAS	37,000	38,500	2.49	2.76	92,200	106,400
UNION	16,500	13,300	2.17	3.05	35,800	40,500
VAN WERT	5,600	4,400	1.59	3.16	8,900	13,900
VINTON	9,000	10,400	1.66	2.85	14,900	29,600
WARREN	15,000	13,000	1.97	2.94	29,500	38,200
WASHINGTON	32,500	31,500	1.69	2.34	54,900	73,800
WAYNE	74,000	77,900	3.02	3.19	223,600	248,200
WILLIAMS	12,000	9,700	2.03	3.25	24,400	31,500
WOOD	7,000	6,100	1.91	3.16	13,400	19,300
WYANDOT	6,000	6,400	1.52	3.47	9,100	22,200
STATE	1,625,000	1,625,000	2.18	2.80	3,543,000	4,553,000

CORN

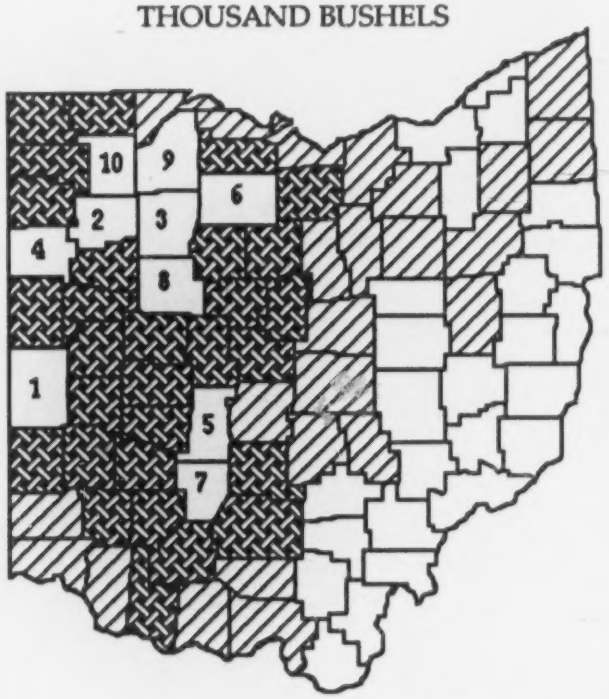
THOUSAND BUSHELS



Symbol	Thousand Bushels
1-10	8,400 +
	3,700 - 8,399
	1,000 - 3,699
	UNDER 1,000

SOYBEANS

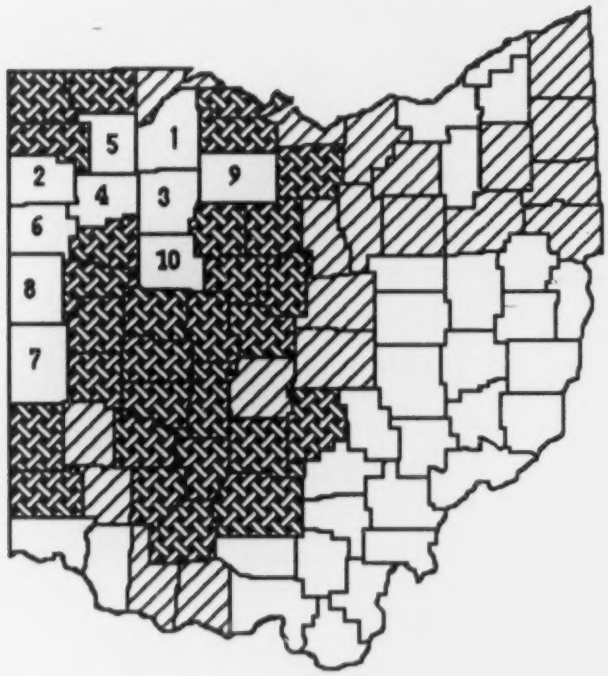
THOUSAND BUSHELS



Symbol	Thousand Bushels
1-10	3,300 +
	1,400 - 3,299
	100 - 1,399
	UNDER 100

WHEAT

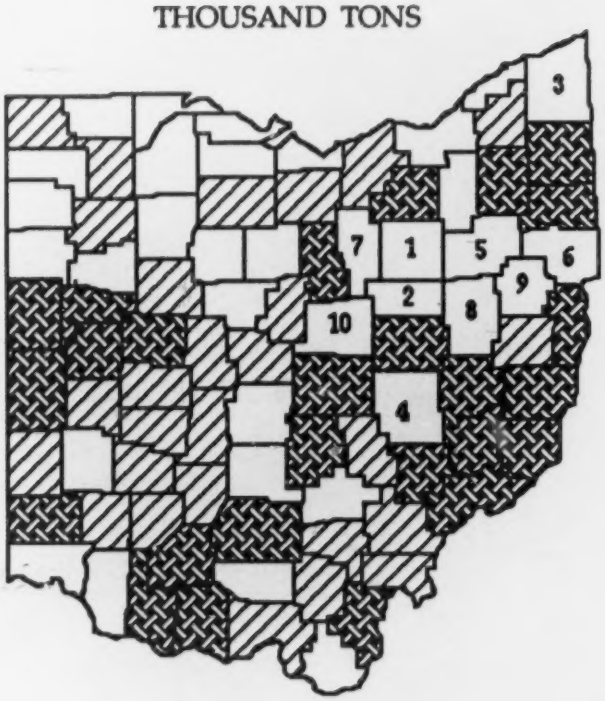
THOUSAND BUSHELS



Symbol	Thousand Bushels
1-10	1,900 +
	500 - 1,899
	100 - 499
	UNDER 100

HAY

THOUSAND TONS



Symbol	Thousand Tons
1-10	101 +
	50 - 100.9
	25 - 49.9
	UNDER 25

OHIO COUNTY ESTIMATES SUGAR BEETS, 1988 and 1989

COUNTY	Acreage Harvested		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Tons per acre		Tons	
Allen	0	*	0	*	0	*
Erie	*	*	*	*	*	*
Hancock	*	*	*	*	*	*
Huron	*	*	*	*	*	*
Lucas	*	*	*	*	*	*
Ottawa	1,010	*	15.8	*	16,000	*
Putnam	1,110	*	14.3	*	15,900	*
Sandusky	7,230	5,720	16.4	16.3	118,700	93,400
Seneca	2,840	2,580	15.8	19.1	44,800	49,400
Wood	1,040	*	11.6	*	12,100	*
Wyandot	*	0	*	0	*	0
OTHER COUNTIES	1,470	3,600	18.0	15.6	26,500	56,200
State	14,700	11,900	15.9	16.7	234,000	199,000

* Counties with less than 1,000 acres not published. Counties with more than 1,000 acres are also not published, if necessary, to preserve the confidentiality of those counties with less than 1,000 acres.

BURLEY TOBACCO: ACRES, YIELD AND PRODUCTION, OHIO, 1988 and 1989

County	Harvested acres		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Lbs. per acre		Lbs.	
Adams	2,100	2,590	1,825	1,690	3,838,000	4,377,000
Brown	2,640	2,940	2,025	1,935	5,343,000	5,689,000
Clermont	735	850	1,740	2,070	1,281,000	1,760,000
Gallia	890	1,100	1,705	1,330	1,519,000	1,463,000
Highland	550	645	1,690	1,855	929,000	1,196,000
Jackson	55	55	1,800	1,545	99,000	85,000
Lawrence	355	370	1,575	1,500	560,000	555,000
Pike	105	110	1,655	1,190	174,000	131,000
Scioto	260	340	2,285	1,535	594,000	522,000
Other 1/	110	100	1,200	1,470	132,000	147,000
State	7,800	9,100	1,855	1,750	14,469,000	15,925,000

1/Includes Athens, Clinton, Fayette, Greene, Hamilton, Meigs, Monroe, Montgomery, Noble, Ross and Warren in 1988 and 1989.

FALL POTATOES: PRODUCTION AND TOTAL STOCKS OHIO, 1987-1989

Crop year	Production	Stocks December 1	Stocks following year			
			January 1	February 1	March 1	April 1
	Thousand hundredweight					
1987	2,254	700	500	300	N/A	N/A
1988	1,697	500	300	50	N/A	N/A
1989	1,462	300	200	50	N/A	N/A

PROCESSING TOMATOES: HARVESTED ACREAGE, YIELD AND PRODUCTION, OHIO 1988 AND 1989

County	Harvested acreage 1988	Harvested acreage 1989	Yield 1988	Yield 1989	Production 1988	Production 1989
	Acres		Tons		Tons	
Clinton	-	180	-	24.9	-	4,490
Darke	1,100	1,160	16.6	16.9	18,300	19,630
Defiance	-	570	-	16.9	-	9,650
Fayette	1,090	-	19.3	-	21,000	-
Fulton	1,410	1,580	21.3	21.8	30,000	34,410
Hancock	520	960	20.4	23.8	10,600	22,880
Henry	910	800	19.7	18.5	17,900	14,760
Lucas	350	330	21.4	22.1	7,500	7,280
Mercer	270	-	17.4	-	4,700	-
Ottawa	1,200	890	16.3	27.7	19,500	24,640
Putnam	2,500	2,530	22.8	22.9	57,000	57,900
Sandusky	3,200	3,600	21.5	23.4	68,800	84,130
Seneca	700	910	22.7	31.1	15,900	28,310
Williams	650	450	22.2	20.6	14,400	9,270
Wood	1,990	1,730	18.2	18.2	36,200	31,570
Other counties 1/	1,810	1,810	19.9	23.4	37,510	42,380
Total	17,700	17,500	20.30	22.36	359,310	391,300

1/ Other counties include: 1988 only: Crawford, Fayette & Mercer; 1989 only: Clinton, Defiance and Wyandot; 1988 & 1989: Allen, Erie, Greene, Huron, Madison, Miami and Van Wert.

PROCESSING TOMATOES: METHOD OF PLANTING AS PERCENT OF HARVESTED ACREAGE, OHIO, 1988 AND 1989

Method of planting	Harvested acreage 1988	Harvested acreage 1989	% of total 1988	% of total 1989
Seeded	500	900	3	5
Transplanted	17,200	16,600	97	95
Total	17,700	17,500	100	100

PROCESSING TOMATOES: METHOD OF HARVESTING AS PERCENT OF HARVESTED ACREAGE, OHIO, 1988 AND 1989

Method of harvesting	Harvested acreage 1988	Harvested acreage 1989	% of total 1988	% of total 1989
Mechanical	15,800	15,500	89	89
Handpicked	1,900	2,000	11	11
Total	17,700	17,500	100	100

FARM REAL ESTATE: VALUE AND CASH RENTS, OHIO, 1986-1990

Year	Average value per acre 1/ 2/		Cash rent per acre 2/		
	Actual	% Prev Year	Cropland	Pasture	Whole Farms
	Dollars			Dollars	
1986	1,136	93	70.30	24.90	65.90
1987	1,097	97	63.20	25.10	58.40
1988	1,199	109	65.60	28.40	62.00
1989	1,271	106	70.80	27.60	66.70
1990	1,258	99	69.10	28.80	68.40

1/Averages for this historic series use census of agriculture data for benchmarks and in intercensal years are based on sample surveys of farmers, farm real estate brokers, land appraisers, local banks, and county officials. 2/Estimates are based on a survey conducted February 1, 1986 through 1989 and January 1, 1990.

GRAIN STOCKS: TOTAL STOCKS AND PERCENT OF PRODUCTION, BY QUARTERS, OHIO, 1988-1989

Crop	Year	March 1		June 1		September 1		December 1	
		All positions	% of prod. 1/	All positions	% of prod. 1/	All positions	% of prod. 1/	All positions	% of prod. 1/
		Thousand bushels							
CORN	1988	325,000	87	219,900	59	146,900	39	316,700	124
	1989	229,900	90	129,500	51	59,100	23	295,100	86
SOYBEANS	1988	66,900	46	36,800	26	18,650	13	89,300	89
	1989	63,200	63	29,401	29	8,600	9	106,000	83
WHEAT	1988	26,100	53	17,800	36	61,100	133	43,200	94
	1989	30,750	67	7,850	17	57,800	92	32,450	52
OATS 2/	1988			5,000	3				
	1989			3,100	3				
ALL HAY 3/	1988			557	13			1,878	53
	1989			531	15			2,322	51

1/ Percent of production refers to previous year's production, except September 1 for wheat and December 1 for all crops when current year production is used. 2/ Stocks estimated only on June 1st. 3/For hay stocks the reference month is May instead of June and the unit is thousand tons instead of thousand bushels.

STOCKS OF GRAIN: BY POSITION AND QUARTER, OHIO, 1988-1989

Crop	Year	March 1		June 1		September 1		December 1	
		On farms	Off farms	On farms	Off farms	On farms	Off farms	On farms	Off farms
		Thousand bushels							
CORN	1988	165,000	160,000	100,000	119,900	45,000	101,900	190,000	126,700
	1989	117,000	112,900	58,000	71,500	25,000	34,100	200,000	95,100
SOYBEANS	1988	30,000	36,900	12,000	24,800	4,000	14,650	37,000	52,300
	1989	22,000	41,200	12,000	17,401	3,800	4,800	52,000	54,000
WHEAT	1988	900	25,200	700	17,100	8,000	53,100	4,000	39,200
	1989	700	30,050	250	7,600	6,500	51,300	2,700	29,750
OATS	1988			2,000	3,000				
	1989			1,400	1,700				

MARKETINGS: WHEAT, OATS, CORN, SOYBEANS, PERCENT OF ANNUAL SALES BY MONTHS, OHIO, 1987-1988, 1988-1989

Month	Wheat		Oats		Month	Corn		Soybeans	
	1987-88	1988-89	1987-88	1988-89		1987-88	1988-89	1987-88	1988-89
	Percent					Percent			
Jul.	60	47	30	30	Sep.	11	4	20	15
Aug.	10	14	20	18	Oct.	24	17	28	32
Sep.	4	8	13	9	Nov.	12	15	8	11
Oct.	1	5	6	4	Dec.	5	9	4	7
Nov.	1	3	5	2	Jan.	8	11	8	10
Dec.	2	6	4	5	Feb.	5	8	5	4
Jan.	4	8	5	7	Mar.	6	9	5	7
Feb.	2	3	4	4	Apr.	4	7	4	4
Mar.	1	2	5	5	May	6	6	7	3
Apr.	1	1	2	6	Jun.	8	4	5	3
May	2	1	3	7	Jul.	6	6	3	1
Jun.	12	2	3	3	Aug.	5	4	3	3

OFF-FARM COMMERCIAL GRAIN STORAGE CAPACITY, DECEMBER 1, 1988 AND 1989

County	Capacity		County	Capacity		County	Capacity	
	12/1/88	12/1/89		12/1/88	12/1/89		12/1/88	12/1/89
	1,000 bushels			1,000 bushels			1,000 bushels	
Adams	857	850	Hancock	18,786	18,698	Paulding	7,302	9,825
Allen	9,852	5,935	Hardin	6,449	6,069	Perry	86	86
Ashland	2,160	2,406	Harrison	3	3	Pickaway	4,738	4,762
Ashtabula	765	772	Henry	9,584	9,334	Pike	0	0
Athens	7	7	Highland	2,871	2,418	Portage	1,850	1,522
Auglaize	5,204	4,782	Hocking	1,400	1,400	Preble	4,504	4,592
Belmont	16	16	Holmes	298	77	Putnam	3,554	3,824
Brown	163	155	Huron	11,741	9,599	Richland	2,469	2,419
Butler	2,324	1,951	Jackson	115	115	Ross	2,939	2,858
Carroll	9	9	Jefferson	2	2	Sandusky	3,855	3,832
Champaign	7,351	7,313	Knox	2,639	1,645	Scioto	174	167
Clark	3,423	3,411	Lake	0	0	Seneca	5,005	4,987
Clermont	0	0	Lawrence	500	500	Shelby	8,690	8,706
Clinton	6,135	5,962	Licking	2,732	2,363	Stark	688	664
Columbiana	683	682	Logan	2,738	2,738	Summit	0	0
Coshocton	3,266	3,270	Lorain	1,848	1,808	Trumbull	477	477
Crawford	5,432	5,244	Lucas	57,948	57,946	Tuscarawas	259	273
Cuyahoga	507	507	Madison	5,795	5,530	Union	1,369	1,353
Darke	4,844	4,446	Mahoning	1,919	1,559	Van Wert	7,852	7,581
Defiance	3,327	3,357	Marion	10,828	10,810	Vinton	0	0
Delaware	1,240	551	Medina	478	484	Warren	521	521
Erie	3,163	3,163	Meigs	17	17	Washington	4	6
Fairfield	1,078	946	Mercer	5,103	5,018	Wayne	4,091	4,416
Fayette	5,542	5,481	Miami	5,517	5,166	Williams	4,194	4,090
Franklin	10,513	9,833	Monroe	3	3	Wood	13,307	12,281
Fulton	13,470	13,525	Montgomery	4,628	4,628	Wyandot	14,257	14,180
Gallia	12	8	Morgan	10	10			
Geauga	184	167	Morrow	4,069	3,995	STATE	362,260	350,080
Greene	2,427	2,405	Muskingum	2,185	2,185			
Guernsey	4	4	Noble	2	2	U.S.		
Hamilton	12,213	12,747	Ottawa	3,696	2,632	Total	9,606,050	9,387,990

CORN SILAGE: HARVESTED ACREAGE, YIELD AND PRODUCTION, BY DISTRICTS, OHIO 1988-89

District	Harvested acres		Yield		Production	
	1988	1989	1988	1989	1988	1989
	Acres		Tons per acre		Thousand tons	
10	32,600	32,000	9.4	16.0	306,200	512,400
20	30,900	27,500	9.5	11.8	293,600	325,500
30	47,000	51,100	10.3	10.9	486,200	555,000
40	45,800	42,400	10.9	17.4	498,900	739,500
50	37,300	28,300	11.9	14.1	442,200	398,800
60	18,600	19,600	10.6	12.1	196,900	237,500
70	13,100	15,800	10.6	16.7	138,600	264,100
80	10,000	9,400	10.7	17.3	107,100	162,600
90	14,700	13,900	10.6	11.8	155,300	164,600
State	250,000	240,000	10.5	14.0	2,625,000	3,360,000

1989 LIVESTOCK, DAIRY AND POULTRY SUMMARY

Cash receipts from cattle, hog and sheep marketings in Ohio during 1989 totaled $786,416,000, a 2 percent increase from 1988 to 1989 and a 1 percent increase over the 1987 figure. Cattle cash receipts advanced 1 percent from 1988 to 1989 following a 7 percent increase from 1987-1988. Hog cash receipts reversed an 8 percent decline from 1987 to 1988 into a 4 percent gain from 1988-1989. Sheep cash receipts declined 18 percent from 1988 to 1989 following a 32 percent decline from 1987 to 1988. Cattle contributed 50 percent to livestock cash receipts; hogs, 49 percent; and sheep, 1 percent.

The number of cattle and calves in Ohio as of January 1, 1990 was estimated at 1,680,000 head, 5 percent less than one year earlier. The value per head on the inventory date was $655, a new record high exceeding the previous record set only last year by $35. The total value of all cattle also reached another new record high at $1,100,400,000. This is about $9,000,000 more than the previous record set one year ago. The inventory estimates by classes all declined with the exceptions of a very modest increase in numbers of milk cows and cattle on feed. Milk cow numbers increased 1,000 head and cattle on feed numbers were up 10,000 head. Heifers grown as replacements to beef and dairy cow herds were down 3 percent and 9 percent respectively indicating the Ohio cattle industry will see further contraction in numbers. The number of cattle operations held steady but beef cow and milk cow operations declined. Cattle and calf production totaled 499 million pounds during 1989; a decline of 13 percent from a year earlier. Marketings of cattle and calves held up better by drawing down inventories. Marketings declined only 4 percent from 1988 to 1989. Cash receipts actually increased 1 percent as prices for cattle and calves strengthened. The 1989 price of cattle, at $66.90 per hundredweight (cwt.), advanced $3.20 per cwt. from a year earlier. Calves sold for an average of $87.00 per cwt., an increase of 90 cents per cwt. from a year earlier.

Ohio hog producers had 2,080,000 hogs on hand December 1, 1989, 6 percent (130,000 head) fewer than a year earlier. The December 1988 inventory was the highest in 15 years which leaves the current December hog count at a fairly high level compared with most inventories during the 1980s. The breeding stock numbered 270,000; down over 8 percent (25,000 head) from a year earlier. Market hogs numbered 1,810,000; 5 percent (105,000 head) less than a year earlier. The average value per head of all hogs including breeding stock and market hogs of all weights was $78.50. This is up $11.00 per head from a year earlier and $17.00 below the record high set in 1986. The September-November pig crop in Ohio amounted to 784,000 head, 9 percent (81,000 head) below the pig crop from the same quarter a year earlier. Earlier in 1989 the pig crops were running higher than a year earlier so the 1989 pig crop of 3,692,000 is just slightly higher than a year earlier. Farrowings are expected to remain below a year earlier in the coming months which should produce smaller pig crops. Estimates by size of operation indicate the largest 9.2 percent of the hog operations in Ohio have 57.1 percent of the hog inventory while the smallest 67.6 percent of the hog operations have only 10.8 percent of the inventory. Hog production totaled 889 million pounds during 1989, an increase of 1 percent from a year earlier. Marketings of 904 million pounds advanced 3 percent. Most of the increased marketings came from inventory reductions. Cash receipts of $383 million advanced 4 percent because of larger marketings and a modest price increase of 20 cents per cwt. to average $42.40 for 1989.

The number of sheep in Ohio bounced back from the record low of a year earlier to 270,000 head; a 10 percent increase from one year ago. All of the classes of sheep showed increased numbers except wether and ram lambs which were unchanged. Stock sheep numbers increased 3 percent from a year earlier and sheep on feed advanced 41 percent. Sheep and lamb value per head averaged $84 as of the inventory date on January 1, 1990. This is down 12 percent from a year earlier. The total value of all sheep and lambs declined 3 percent from a year earlier because of the lower prices. The number of operations with sheep also increased by 100 from a year ago. An operation is counted even if only one animal is present at any time during the year. This means 4-H or other type activities are counted as sheep operations. Sheep and lamb production during 1989 totaled 17 million pounds for a slight decline of 1 percent from 1988. Marketings of 15 million pounds declined 23 percent from a year earlier because of an inventory build up from a year earlier. Cash receipts of $8.6 million for 1989 decreased 18 percent from a year earlier. Cash receipts declined less than marketings because there was a much larger proportion of lambs marketed during 1989 as compared with 1988.

Ohio milk production during 1989 totaled 4,555,000,000 pounds, a decline of 230,000,000 pounds (5 percent) from the previous year. The 1989 output per cow was 13,014 pounds; a decline of 618 pounds per cow from a year earlier. The value of milk produced during 1989 was $613 million, up almost $36 million (6 percent) from a year earlier. The average price per cwt. for milk produced during 1989 was $13.46, an increase of $1.40 per cwt. from a year earlier. This price increase more than offset lower production to boost overall value of milk produced.

Ohio egg production totaled 4,353,000,000 eggs during 1989, down 3 percent from the record high of 4,470,000,000 eggs set in 1988. Eggs commanded an average 50.4 cents per dozen during 1989, an increase of 13.2 cents per dozen from a year earlier. This boosted value of production for Ohio eggs in 1989 to $182.8 million compared with $138.8 million a year earlier. This is an increase of 32 percent.

The number of turkeys raised during the 1989 production year (September 1, 1988 through August 31, 1989) was 4.1 million; up 14 percent from a year earlier. These birds weighed a total of 110.3 million pounds or 18 percent more than the previous year. The price per pound for 1989 was 41 cents; up 5 cents from a year earlier. The value of turkey production during 1989 in Ohio was $45.2 million, up 34 percent from the 1988 value of production.

Broiler production totaled 72 million pounds in 1989, up 15 percent from the 1988 figure of 62.4 million pounds. Producers received a liveweight equivalent price of 29 cents per pound; up half a cent from a year earlier. Value of 1989 broiler production was $20.9 million, up almost 18 percent from the $17.8 million in 1988.

The number of bee colonies in Ohio in 1989 at 53,000, increased 3,000 from a year earlier and was 2,000 fewer than the number of colonies in Ohio in 1987. Yield per colony dropped sharply from a year earlier because of the wet, rainy weather from April through June in 1989. Most colonies of bees had an abbreviated production season and apiarists left a significant part of the production in the hives to provide food for overwintering. The 1989 yield was 20 pounds per hive compared with 48 pounds a year earlier. Honey stocks in Ohio dropped 44 percent from 1988 to 1989 and amounted to 413,000 pounds. The price per pound did not change much - it fell one cent a pound because at the U.S. level production apparently was adequate to meet demand and stocks were down only 2 percent.

CATTLE AND CALVES: OHIO AND UNITED STATES JANUARY 1, 1989 AND 1990

Class	OHIO			UNITED STATES		
	1989	1990	1990/89	1989	1990	1990/89
	1,000 head		Percent	1,000 head		Percent
Cattle and calves	1,760	1,680	95	99,180	99,337	100
Cows & heifers that have calved	738	734	99	43,727	43,854	100
Beef cows	385	380	99	33,515	33,705	101
Milk cows	353	354	100	10,212	10,149	99
Heifers 500 pounds and over						
For beef cow replacement	70	68	97	5,477	5,474	100
For milk cow replacement	181	165	91	4,205	4,291	102
Other heifers	99	83	84	7,725	8,093	105
Steers 500 pounds and over	248	220	89	15,679	16,067	102
Bulls 500 pounds and over	40	39	98	2,215	2,211	100
Calves under 500 pounds	384	371	97	20,152	19,348	96
Calf crop 1/	685	645	94	40,588	40,142	99
Cattle on feed	200	210	105	11,440	11,626	102
	Dollars			Dollars		
Cattle and calves value per head 2/	620	655	106	607	641	106
	Million Dollars			Million Dollars		
Cattle and calves total value	1,091.2	1,100.4	101	60,234.2	63,627.2	106
	Number			Number		
Number of cattle oper. 1/ 2/	42,000	42,000	100	1,355,720	1,326,800	98
Number of beef cow oper.1/ 2/ 3/	24,500	24,000	98	970,480	949,640	98
Number of milk cow oper.1/ 2/ 3/	9,500	9,200	97	217,440	204,910	94

1/ During 1988 and 1989. 2/ Whole numbers; not in thousands. 3/ Included in cattle operations.

CATTLE AND CALVES: INVENTORY AND DISPOSITION, OHIO, 1987-89

Year	On hand January 1	Calves born	Inship-ments	Marketings		On farm slaughter	Deaths	
				Cattle	Calves		Cattle	Calves
	Thousand head							
1987	1,800	700	120	545	140	5	45	65
1988	1,820	685	46	534	165	7	30	55
1989	1,760	645	52	520	168	4	25	60

CATTLE AND CALVES: PRODUCTION AND INCOME, OHIO, 1987-89

Year	Production	Marketings	Average price per 100 lbs.		Cash receipts	Value of home consumption	Gross income
			Cattle	Calves			
	Thousand pounds		Dollars		Thousand dollars		
1987	578,960	613,250	58.60	73.10	365,238	19,476	384,714
1988	575,240	603,860	63.70	86.10	391,345	19,233	410,578
1989	498,736	579,946	66.90	87.00	394,335	21,235	415,570

MILK: COWS ON FARMS, MILK PER COW, MILK PRODUCTION, MILKFAT BY MONTHS, OHIO, 1988 AND 1989

Month	Cows on farm		Milk per cow		Milk production		Milkfat-all milk	
	1988	1989	1988	1989	1988	1989	1988	1989
	Thousand head		Pounds		Million pounds		Percent	
January	350	352	1,125	1,145	394	403	3.86	3.74
February	351	351	1,075	1,055	377	370	3.85	3.80
March	350	352	1,170	1,175	410	414	3.79	3.79
April	351	352	1,160	1,160	407	408	3.72	3.75
May	352	353	1,225	1,220	431	431	3.63	3.64
June	352	351	1,165	1,085	410	381	3.53	3.60
July	352	350	1,155	1,070	407	375	3.48	3.54
August	351	349	1,120	1,060	393	370	3.47	3.52
September	350	349	1,110	1,005	389	351	3.60	3.61
October	352	349	1,115	1,015	392	354	3.71	3.71
November	352	349	1,085	985	382	344	3.81	3.80
December	351	347	1,120	1,020	393	354	3.84	3.88
Annual	351	350	13,632	13,014	4,785	4,555	3.69	3.70

MILK PRODUCTION AND DISPOSITION, OHIO, 1988 AND 1989

Year	Milk used where produced			Milk marketed by producers				Total milk produced
	Fed to calves	Used for milk, cream and butter	Total	Sold to plants & dealers: As whole milk	Sold to plants & dealers: As separated cream	Sold 1/ directly to consumers	Total marketed	
	Million pounds							
1988	20	15	35	4,735	-	15	4,750	4,785
1989	20	10	30	4,510	-	15	4,525	4,555

1/Includes institutional herds.

MILK: QUANTITY MARKETED, PRICE, CASH RECEIPTS AND VALUE, OHIO, 1988 AND 1989

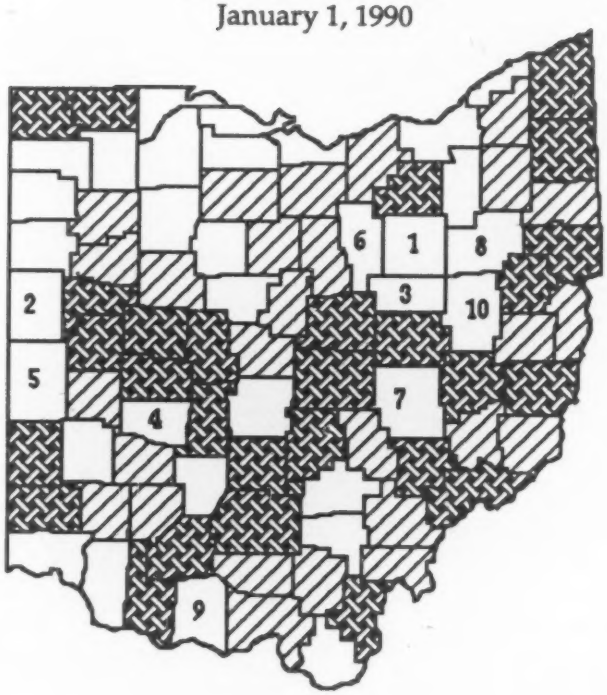
Year	Combined marketings milk & cream			Used for milk, cream & butter where produced		Gross producer income	Value of milk produced
	Milk utilized	Price per 100 lbs.	Cash receipts from marketings	Milk utilized	Value		
	Mil. lbs.	Dollars	1,000 $	Mil. lbs.	1,000 $	1,000 $	1,000 $
1988	4,750	12.06	572,874	15	1,809	574,683	577,096
1989	4,525	13.46	608,945	10	1,346	610,290	612,982

MILK COWS: PERCENT OF OPERATIONS AND INVENTORY BY SIZE GROUPS, OHIO, 1987 AND 1988

Item	Size of operation							
	1-29 Head		30-49 Head		50-99 Head		100+ Head	
	1987	1988	1987	1988	1987	1988	1987	1988
	Percent							
Operations	51.5	50.5	17.8	21.1	23.8	22.1	6.9	6.3
Inventory	16.9	17.7	17.9	19.3	41.3	39.8	23.9	23.2

ALL CATTLE

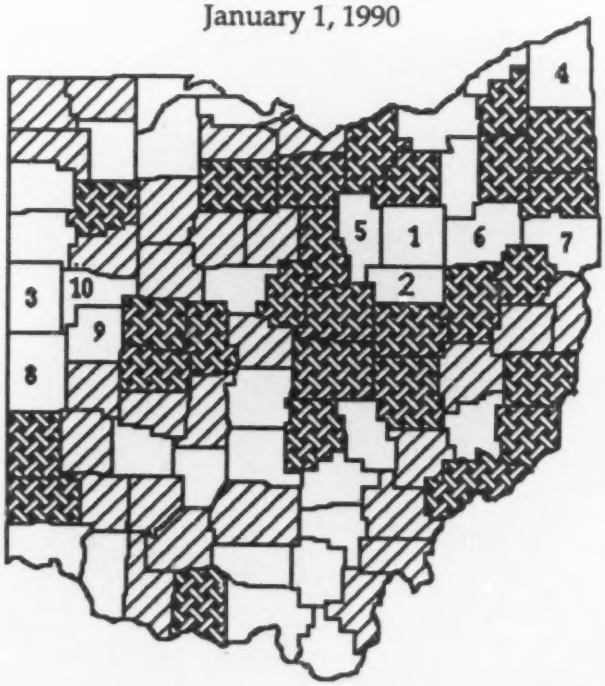
THOUSAND HEAD
January 1, 1990



Symbol	Thousand Head
1-10	32.0 and OVER
	20.0 - 31.9
	11.0 - 19.9
	UNDER 11.0

MILK COWS

THOUSAND HEAD
January 1, 1990



Symbol	Thousand Head
1-10	9.6 and OVER
	2.6 - 9.5
	1.3 - 2.6
	UNDER 1.3

OHIO COUNTY ESTIMATES
ALL CATTLE AND MILK COWS: ON FARMS, JANUARY 1, 1989 - 1990

ALL MILK SOLD TO PLANTS AND DEALERS, OHIO, 1988 - 1989

COUNTY	ALL CATTLE & CALVES		MILK COWS & HEIFERS THAT HAVE CALVED		MILK SOLD	
	JANUARY 1, 1989	JANUARY 1, 1990	JANUARY 1, 1989	JANAURY 1, 1990	1988	1989
ADAMS	32,500	32,100	4,800	5,150	50.6	49.5
ALLEN	12,500	11,600	1,250	1,300	19.2	19.0
ASHLAND	42,000	38,200	12,300	12,700	156.5	150.4
ASHTABULA	26,800	26,800	13,600	13,100	161.2	149.6
ATHENS	15,500	14,700	1,600	1,600	22.0	20.2
AUGLAIZE	28,800	28,600	9,400	9,700	144.8	133.9
BELMONT	28,200	26,800	3,400	3,150	39.8	33.9
BROWN	24,000	23,400	2,350	2,450	24.9	23.3
BUTLER	24,000	22,100	3,600	3,650	42.8	42.9
CARROLL	29,300	29,500	6,000	6,250	68.4	65.2
CHAMPAIGN	27,700	27,300	5,650	5,700	65.7	61.1
CLARK	44,000	40,900	1,450	1,400	12.7	11.6
CLERMONT	8,300	7,200	1,050	1,100	9.4	8.9
CLINTON	13,700	11,300	1,350	1,300	18.0	15.6
COLUMBIANA	27,200	27,000	13,000	12,400	170.8	153.8
COSHOCTON	22,800	22,800	4,800	5,050	59.7	63.5
CRAWFORD	17,500	16,800	2,000	2,050	29.0	28.0
CUYAHOGA	*	*	*	*	*	*
DARKE	43,000	39,500	10,000	10,100	146.6	137.1
DEFIANCE	12,000	10,700	2,300	2,500	23.9	30.6
DELAWARE	11,600	11,100	2,150	2,150	25.9	24.9
ERIE	10,000	9,500	1,900	2,000	14.5	14.0
FAIRFIELD	25,000	23,500	3,100	3,050	41.7	37.1
FAYETTE	10,300	9,300	*	*	*	*
FRANKLIN	7,000	6,700	1,100	1,150	13.9	13.7
FULTON	25,800	24,200	1,900	2,050	30.6	28.9
GALLIA	20,500	20,100	2,100	2,250	28.2	27.3
GEAUGA	15,900	16,200	5,200	4,800	66.1	58.8
GREENE	18,300	17,100	*	*	*	*
GUERNSEY	25,200	23,400	1,850	1,850	21.7	21.4
HAMILTON	4,600	4,200	*	*	*	*
HANCOCK	6,200	5,900	1,250	1,350	11.5	12.1
HARDIN	18,500	18,400	2,100	2,000	31.4	29.8
HARRISON	18,600	19,000	2,500	2,300	37.5	34.1
HENRY	9,200	8,100	1,250	1,250	20.6	15.6
HIGHLAND	24,700	23,700	2,500	2,450	29.9	28.4
HOCKING	6,100	5,600	*	*	*	*
HOLMES	51,000	52,400	21,600	21,100	254.3	253.0
HURON	12,700	11,800	3,900	3,950	62.6	57.1
JACKSON	12,800	12,300	*	*	*	*
JEFFERSON	11,400	11,500	1,500	1,500	23.0	21.7
KNOX	28,300	25,900	8,000	8,200	101.0	99.9
LAKE	*	1,100	*	*	*	*
LAWRENCE	9,500	9,300	*	*	*	*
LICKING	28,500	27,300	5,200	5,150	63.8	61.7
LOGAN	26,000	23,600	6,600	6,200	97.0	87.6
LORAIN	14,500	13,700	5,850	6,100	82.6	80.2
LUCAS	1,300	*	*	*	*	*

OHIO COUNTY ESTIMATES
ALL CATTLE AND MILK COWS: ON FARMS, JANUARY 1, 1989 - 1990

ALL MILK SOLD TO PLANTS AND DEALERS, OHIO, 1988 - 1989

COUNTY	ALL CATTLE & CALVES		MILK COWS & HEIFERS THAT HAVE CALVED		MILK SOLD	
	JANUARY 1, 1989	JANUARY 1, 1990	JANUARY 1, 1989	JANAURY 1, 1990	1988	1989
MADISON	21,000	20,200	2,200	2,250	26.8	24.8
MAHONING	14,700	14,400	6,300	6,150	75.6	71.1
MARION	10,500	9,900	1,150	1,250	16.3	16.6
MEDINA	24,200	24,500	7,900	7,500	105.9	95.5
MEIGS	12,600	11,400	1,550	1,500	17.5	16.6
MERCER	56,000	52,900	18,500	19,400	289.9	283.9
MIAMI	18,500	18,400	2,300	2,300	32.5	29.2
MONROE	19,500	18,000	2,750	2,700	29.4	27.4
MONTGOMERY	8,500	7,500	1,400	1,350	19.8	18.4
MORGAN	23,700	22,600	1,400	1,400	20.0	19.5
MORROW	14,800	14,300	2,750	2,950	29.6	31.2
MUSKINGUM	37,000	34,200	3,200	3,150	42.2	40.2
NOBLE	16,000	15,500	*	*	*	*
OTTAWA	2,000	1,900	*	*	*	*
PAULDING	5,800	5,400	*	*	*	*
PERRY	14,500	13,300	*	*	*	*
PICKAWAY	26,000	23,100	1,200	1,250	13.1	11.8
PIKE	12,000	11,900	1,000	1,050	7.4	8.2
PORTAGE	15,400	14,700	4,300	4,150	58.7	52.6
PREBLE	25,200	22,200	3,650	3,400	45.6	42.3
PUTNAM	12,500	11,000	2,700	2,950	46.0	42.5
RICHLAND	22,000	19,900	5,500	5,700	74.7	72.7
ROSS	27,300	25,600	1,400	1,500	14.7	14.0
SANDUSKY	11,300	10,100	1,800	1,700	16.5	14.7
SCIOTO	11,500	11,200	1,200	1,150	27.6	25.1
SENECA	14,300	12,700	3,000	2,950	38.8	35.0
SHELBY	31,500	29,400	9,500	9,900	134.0	129.0
STARK	33,000	33,600	12,500	12,400	199.5	185.9
SUMMIT	1,900	1,800	*	*	*	*
TRUMBULL	20,000	20,200	7,600	7,750	95.3	91.1
TUSCARAWAS	31,700	32,000	9,000	8,650	170.7	154.8
UNION	24,700	24,100	3,300	3,300	42.2	37.5
VAN WERT	5,100	4,600	1,150	1,150	17.2	16.5
VINTON	7,900	7,300	*	*	*	*
WARREN	17,400	16,400	1,500	1,550	18.4	17.6
WASHINGTON	29,000	26,000	3,100	3,100	44.8	43.3
WAYNE	105,000	107,000	36,000	35,700	548.3	515.4
WILLIAMS	23,300	21,300	1,800	2,050	34.0	29.7
WOOD	9,300	8,200	*	*	*	*
WYANDOT	7,700	7,400	1,350	1,400	15.6	14.9
OTHER	1,900	1,700	7,600	7,850	92.6	90.6
STATE	1,760,000	1,680,000	353,000	354,000	4,785.0	4,525.0

*Counties with less than 1,000 head not published. Counties with more than 1,000 head are also unpublished, if necessary, to preserve the confidentially of counties with less than 1,000 head.

MANUFACTURED DAIRY PRODUCTS: PRODUCTION BY MONTHS, OHIO, 1988 AND 1989

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
						American cheese - thousand pounds							
1988	1,218	1,161	1,393	1,504	2,150	1,362	1,158	1,066	1,384	1,313	1,155	1,870	16,734
1989	1,549	953	849	983	1,474	1,232	1,026	1,122	1,219	1,230	1,962	1,665	15,264
						Swiss cheese - thousand pounds							
1988	4,861	4,806	4,700	4,932	5,497	5,441	5,371	5,337	4,889	4,869	4,405	4,706	59,814
1989	5,378	5,160	5,589	5,628	6,409	5,588	4,958	4,978	4,049	3,826	2,484	2,886	56,933
						All cheese - thousand pounds							
1988	7,846	7,758	8,345	8,102	9,349	8,504	7,968	8,063	7,959	8,028	7,195	8,309	97,426
1989	8,611	7,695	8,255	7,865	9,555	8,377	7,353	7,752	7,027	6,838	6,420	6,389	92,137
						Cottage cheese curd - thousand pounds							
1988	1,838	2,025	2,471	1,570	1,815	1,910	1,854	2,161	1,755	1,634	1,557	1,571	22,161
1989	1,653	1,894	2,053	2,091	1,950	1,765	1,610	1,940	1,589	1,593	1,574	1,337	21,049
						Cottage cheese, lowfat - thousand pounds							
1988	1,259	1,361	1,592	1,012	1,144	1,536	1,828	1,564	1,280	1,227	1,088	1,256	16,147
1989	1,323	1,298	1,706	1,717	1,677	1,512	1,252	1,355	1,457	1,368	1,026	1,223	16,914
						Cottage cheese, creamed - thousand pounds							
1988	3,142	3,414	3,985	2,729	4,139	3,393	3,367	4,049	3,230	2,983	2,999	3,184	40,614
1989	2,435	2,348	3,384	3,803	4,044	3,749	3,085	4,310	3,441	3,397	3,500	2,814	40,310
						Ice cream mix - thousand gallons							
1988	1,352	1,794	2,072	2,079	2,162	2,682	2,295	2,287	1,923	1,616	1,322	1,504	23,088
1989	1,043	1,252	1,543	1,443	1,726	1,968	1,903	1,789	1,474	1,134	1,163	1,022	17,460
						Ice Milk Mix- thousand gallons							
1988	306	324	547	686	899	1,033	880	843	515	366	278	273	6,950
1989	371	379	628	666	966	1,074	1,081	996	657	384	464	231	7,897
						Milk sherbet mix - thousand gallons							
1988	109	138	183	182	203	274	230	200	120	117	97	142	1,995
1989	88	79	139	147	208	185	158	123	87	81	77	96	1,468
						Ice Cream - thousand gallons							
1988	2,496	3,374	3,569	3,734	3,848	4,833	4,132	4,025	3,416	3,142	2,358	2,687	41,615
1989	1,893	2,260	2,697	2,504	2,916	3,260	3,174	2,967	2,549	2,240	2,174	1,937	30,571
						Ice milk - thousand gallons							
1988	544	631	1,000	1,284	1,556	1,816	1,670	1,558	1,010	756	537	637	12,999
1989	691	727	1,140	1,221	1,764	1,963	1,962	1,806	1,245	830	877	561	14,787
						Milk sherbet - thousand gallons							
1988	150	208	243	234	262	327	272	226	183	186	148	198	2,637
1989	169	162	251	251	293	295	281	229	168	140	148	190	2,577
						Water ices - thousand gallons							
1988	36	45	213	85	51	162	156	115	31	24	18	17	953
1989	34	44	105	131	172	60	30	31	21	19	20	14	681

HOGS: INVENTORY NUMBER, PIG CROP, AND DISPOSITION, OHIO, 1987-89

Year	December 1 inventory 1/	Pig crop		Inshipments	Marketings 2/	Farm slaughter 3/	Deaths
		Dec.-May	Jun.-Nov.				
				Thousand head			
1987	2,000	1,640	1,772	197.3	3,301.3	8	200
1988	2,100	1,841	1,827	192.0	3,522.0	13	215
1989	2,210	1,884	1,808	160.0	3,744.0	8	230

1/December 1 previous year. 2/Excludes interfarm sales. 3/Excludes custom slaughter for farmers at commercial establishments.

ALL HOGS AND PIGS: QUARTERLY INVENTORY, BY CLASSES, OHIO 1988 AND 1989, U.S. 1989

Year and quarter	Total hogs	Breeding hogs	Market hogs and pigs				
			Under 60 lbs.	60-119 lbs.	120-179 lbs.	180 lbs. and over	Total
	Thousand head						
OHIO							
Mar. 1, 1988	2,000	285	670	385	385	275	1,715
June 1, 1988	2,300	310	900	450	365	275	1,990
Sep. 1, 1988	2,300	300	800	475	425	300	2,000
Dec. 1, 1988	2,210	295	720	480	395	320	1,915
Mar. 1, 1989	2,050	300	700	403	370	277	1,750
June 1, 1989	2,200	300	855	455	340	250	1,900
Sep. 1, 1989	2,300	285	800	485	420	310	2,015
Dec. 1, 1989	2,080	270	660	462	389	299	1,810
UNITED STATES							
Mar. 1, 1989	52,965	7,076	17,624	10,995	9,498	7,772	45,889
June 1, 1989	55,880	7,330	20,682	12,085	8,780	7,003	48,550
Sep. 1, 1989	55,595	6,867	19,233	12,570	10,615	8,310	50,728
Dec. 1, 1989	53,852	6,868	17,195	12,185	9,680	7,923	46,983

HOGS: PRODUCTION AND INCOME, OHIO, 1987-89

Year	Production	Marketings	Price per cwt.	Cash receipts	Value of home consumption	Gross income
	Thousand pounds		Dollars		Thousand dollars	
1987	794,959	787,712	51.00	401,967	2,698	404,665
1988	881,870	874,372	42.20	369,267	3,184	372,451
1989	888,876	903,566	42.40	383,456	1,618	385,074

SOW FARROWINGS, PIGS PER LITTER, AND PIG CROP, OHIO, 1988 AND 1989

Year	December-May pig crop 1/			June-November pig crop		
	Sows farrowing	Pigs/litter	Pig crop	Sows farrowing	Pigs/litter	Pig crop
	Thou. head	Head	Thou. head	Thou. head	Head	Thou. head
1988	240	7.67	1,841	236	7.74	1,827
1989	240	7.85	1,884	226	8.00	1,808

1/December previous year.

HOGS AND PIGS: PERCENT OF OPERATIONS AND INVENTORY BY SIZE GROUP, OHIO, 1988 AND 1989

Item	Size of operation					
	1-99		100-499		500+	
	1988	1989	1988	1989	1988	1989
	Percent					
Operations	67.6	68.3	24.1	22.5	8.3	9.2
Inventory	12.0	10.8	33.0	32.1	55.0	57.1

SHEEP & LAMBS, OHIO and U.S., JANUARY 1, 1989 and 1990

Class	Ohio			United States		
	1989	1990	1990/89	1989	1990	1990/89
	1,000 head		Percent	1,000 head		Percent
All sheep & lambs 1/	246.0	270.0	110	10,857.5	11,368.4	105
On feed	46.0	65.0	141	1,646.0	1,717.0	104
Stock sheep	200.0	205.0	103	9,211.5	9,651.4	105
Lambs						
Ewes	24.0	27.0	113	1,344.3	1,337.7	100
Wethers & rams	4.0	4.0	100	346.0	309.2	89
One year old & older						
Ewes	165.0	166.0	101	7,187.1	7,648.7	106
Wethers & rams	7.0	8.0	114	334.1	355.8	106
New crop lambs 2/	10.0	11.0	110	821.3	772.9	94
Lamb crop 3/	195.0	200.0	103	7,206.1	7,739.0	107
	Dollars			Dollars		
All sheep & lambs value per head 4/	95.00	84.00	88	82.40	79.40	96
	1,000 dollars			1,000 dollars		
All sheep & lambs total value 4/	23,370	22,680	97	894,912	903,598	101
	Number			Number		
Operations with sheep 5/	7,200	7,300	101	113,440	111,040	98

1/New crop lambs are not included in sheep and lamb inventory estimates in this report. 2/Includes all lambs born after September 30 previous year that are on hand January 1. 3/Lamb crop is lambs born in the Native States plus lambs docked or branded in the Western States for the period October 1-September 30. 4/Based on reporters' estimates of average price per head in their localities. 5/An operation is any place having one or more sheep on hand at any time during the year.

SHEEP: INVENTORY AND DISPOSITION, OHIO, 1987-89

Year	Inventory January 1	Lamb crop	Inshipments	Marketings: Sheep	Marketings: Lambs	Farm slaughter	Deaths: Sheep	Deaths: Lambs
	Thousand head							
1987	300	205	6.0	21	187.0	4.0	12.0	22
1988	265	195	2.0	51	133.0	1.0	12.0	19
1989	246	200	1.5	17	130.5	1.5	8.5	20

SHEEP: PRODUCTION AND INCOME, OHIO, 1987-89

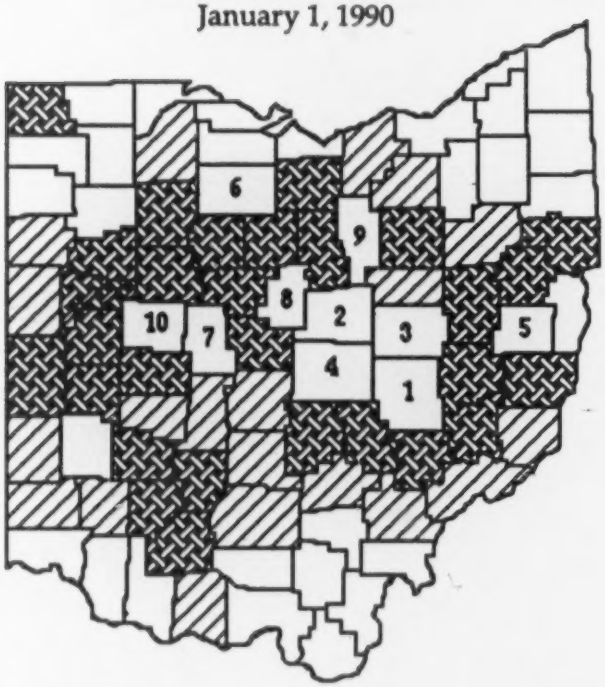
Year	Production	Marketings	Average price per cwt.: Sheep	Average price per cwt.: Lambs	Cash receipts	Value of home consumption	Gross income
	Thousand pounds		Dollars		Thousand dollars		
1987	16,420	21,328	33.30	77.10	15,293	235	15,528
1988	17,406	19,401	30.00	65.10	10,471	79	10,550
1989	17,230	15,020	23.90	62.60	8,625	109	8,734

WOOL: PRODUCTION AND VALUE, OHIO, 1987-89

Year	Sheep shorn	Weight per fleece	Production	Price per pound	Value
	Thousand head	Pounds	Thousand pounds	Dollars	Thousand dollars
1987	273	7.2	1,959	0.54	1,058
1988	260	7.1	1,845	0.71	1,310
1989	268	6.8	1,822	0.74	1,348

STOCK SHEEP

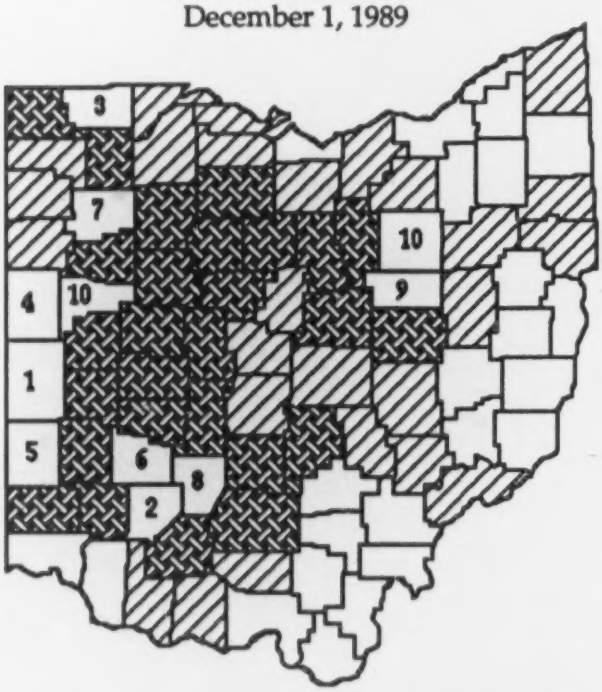
THOUSAND HEAD
January 1, 1990



Symbol	Thousand Head
1-10	5.0 and OVER
	2.0 - 4.9
	1.0 - 1.9
	UNDER 1.0

HOGS AND PIGS

THOUSAND HEAD
December 1, 1989



Symbol	Thousand Head
1-10	51.0 and OVER
	25.0 - 50.9
	5.0 - 24.9
	UNDER 5.0

OHIO COUNTY ESTIMATES
HOGS AND PIGS: NUMBER ON FARMS, DECEMBER 1, 1988 - 1989

STOCK SHEEP: NUMBER ON FARMS, JANUARY 1, 1989 - 1990

COUNTY	HOGS AND PIGS DECEMBER 1, 1988	HOGS AND PIGS DECEMBER 1, 1989	STOCK SHEEP & LAMBS JANUARY 1, 1989	STOCK SHEEP & LAMBS JANUARY 1, 1990
ADAMS	17,200	16,500	1,100	1,050
ALLEN	42,000	39,000	1,900	2,000
ASHLAND	25,000	25,000	5,000	5,000
ASHTABULA	6,800	6,600	*	*
ATHENS	2,300	2,100	1,200	1,200
AUGLAIZE	55,000	51,000	2,600	2,550
BELMONT	*	*	2,300	2,550
BROWN	7,600	7,700	*	*
BUTLER	27,000	25,000	1,200	1,200
CARROLL	3,700	3,800	2,200	2,450
CHAMPAIGN	27,000	25,000	2,800	2,900
CLARK	40,000	35,000	1,100	1,100
CLERMONT	4,000	3,900	*	*
CLINTON	95,000	92,000	2,300	2,500
COLUMBIANA	8,400	8,500	2,200	2,250
COSHOCTON	28,000	28,000	8,800	9,200
CRAWFORD	25,400	25,000	3,100	3,350
CUYAHOGA	*	*	*	*
DARKE	128,000	1 12,000	2,800	2,750
DEFIANCE	23,500	21,500	*	*
DELAWARE	24,000	23,000	2,300	2,250
ERIE	4,600	4,700	*	*
FAIRFIELD	42,000	40,000	3,300	3,500
FAYETTE	60,000	56,000	2,600	2,750
FRANKLIN	8,100	8,000	*	1,100
FULTON	97,000	90,000	*	*
GALLIA	3,700	3,500	*	*
GEAUGA	3,500	3,500	*	*
GREENE	80,000	75,000	2,300	2,150
GUERNSEY	3,700	3,500	2,100	2,300
HAMILTON	*	*	*	*
HANCOCK	33,000	30,500	3,700	3,550
HARDIN	40,000	38,000	4,100	4,100
HARRISON	1,600	1,600	6,800	7,000
HENRY	36,000	34,000	*	*
HIGHLAND	41,000	41,000	3,600	3,650
HOCKING	2,800	2,500	1,400	1,500
HOLMES	54,000	53,000	1,700	1,700
HURON	17,400	17,000	2,800	2,750
JACKSON	4,500	4,400	*	*
JEFFERSON	2,900	2,800	*	*
KNOX	31,400	32,000	10,000	10,300
LAKE	*	*	*	*
LAWRENCE	*	*	*	*
LICKING	18,500	18,000	7,200	7,400
LOGAN	26,000	25,000	4,600	5,000
LORAIN	5,500	5,200	1,100	1,150
LUCAS	13,600	12,000	*	*

OHIO COUNTY ESTIMATES
HOGS AND PIGS: NUMBER ON FARMS, DECEMBER 1, 1988 - 1989

STOCK SHEEP: NUMBER ON FARMS, JANUARY 1, 1989 - 1990

COUNTY	HOGS AND PIGS DECEMBER 1, 1988	HOGS AND PIGS DECEMBER 1, 1989	STOCK SHEEP & LAMBS JANUARY 1, 1989	STOCK SHEEP & LAMBS JANUARY 1, 1990
MADISON	49,000	50,000	1,900	1,900
MAHONING	6,300	6,100	*	*
MARION	30,000	31,000	3,600	3,550
MEDINA	12,500	11,500	1,700	1,750
MEIGS	1,900	1,700	*	*
MERCER	103,000	90,000	1,500	1,650
MIAMI	42,000	37,000	2,400	2,350
MONROE	2,200	2,100	1,600	1,650
MONTOGOMERY	30,000	28,000	*	*
MORGAN	5,800	5,000	2,300	2,250
MORROW	23,000	22,500	5,300	5,150
MUSKINGUM	24,000	22,500	17,500	17,700
NOBLE	2,100	1,900	3,400	3,800
OTTAWA	7,800	7,600	*	*
PAULDING	10,300	9,000	*	*
PERRY	5,800	5,600	3,300	3,500
PICKAWAY	43,000	40,000	1,600	1,700
PIKE	8,200	8,100	*	*
PORTAGE	5,000	4,800	*	*
PREBLE	81,000	76,000	1,500	1,450
PUTNAM	80,000	71,000	*	*
RICHLAND	24,500	25,000	2,500	2,400
ROSS	27,000	25,000	1,600	1,700
SANDUSKY	20,300	20,000	*	*
SCIOTO	2,400	2,400	*	*
SENECA	32,000	31,500	5,900	6,400
SHELBY	51,000	44,000	2,100	2,050
STARK	12,500	12,000	1,600	1,450
SUMMIT	*	*	*	*
TRUMBULL	3,000	3,100	*	*
TUSCARAWAS	11,000	11,000	2,200	2,250
UNION	37,000	34,500	5,600	6,300
VAN WERT	20,600	18,000	1,600	1,600
VINTON	2,200	2,000	*	*
WARREN	27,000	25,200	1,100	1,200
WASHINGTON	6,200	6,100	1,800	1,850
WAYNE	50,000	51,000	3,600	3,850
WILLIAMS	37,200	35,000	2,100	2,050
WOOD	20,800	19,000	1,100	1,100
WYANDOT	28,500	29,000	2,800	2,750
OTHER	3,200	3,000	16,600	15,450
STATE	2,210,000	2,080,000	200,000	205,000

*Counties with less than 1,00 head not published. Counties with more than a 1,000 head are also unpublished, if necessary, to preserve the confidentially of counties with less than 1,000 head.

COMMERCIAL SLAUGHTER: BY MONTH, OHIO, 1988 AND 1989 1/

Month	Number of head		Average liveweight		Number of head		Average liveweight	
	1988	1989	1988	1989	1988	1989	1988	1989
	Thousands		Pounds		Thousands		Pounds	
	Cattle				Calves			
January	35.0	28.0	1,137	1,119	11.8	12.0	191	173
February	32.0	24.5	1,129	1,129	11.1	9.5	217	146
March	33.3	27.5	1,096	1,121	10.6	9.4	179	164
April	31.6	27.0	1,109	1,124	8.5	5.2	208	164
May	35.0	31.4	1,109	1,135	9.7	7.7	237	195
June	37.4	26.4	1,107	1,115	14.9	9.1	194	193
July	36.4	20.5	1,110	1,102	15.6	11.0	169	180
August	38.1	21.5	1,107	1,117	13.8	10.8	176	195
September	35.0	18.4	1,110	1,113	12.1	8.4	174	218
October	36.9	25.0	1,113	1,117	10.7	10.6	192	177
November	40.0	25.6	1,120	1,113	10.5	9.1	159	151
December	33.3	19.4	1,122	1,126	11.9	9.3	167	153
Annual	423.9	295.2	1,114	1,120	141.1	112.0	187	176
	Hogs				Sheep			
January	223.9	247.2	251	250	1.1	1.0	112	110
February	218.7	233.2	251	248	1.0	1.2	108	101
March	252.5	258.8	252	248	2.6	2.7	98	103
April	227.7	238.9	251	249	2.8	2.5	90	102
May	242.5	262.2	251	249	2.1	2.4	108	104
June	248.6	253.6	252	249	2.5	2.2	107	102
July	228.6	222.7	251	247	2.4	1.8	108	104
August	260.7	254.9	250	249	2.7	2.5	103	106
September	269.7	257.9	249	247	2.4	2.0	102	104
October	281.5	287.4	248	248	2.2	1.9	105	105
November	279.1	270.9	252	253	2.0	1.7	106	105
December	275.0	251.2	249	253	1.5	1.2	106	108
Annual	3,008.4	3,039.0	251	249	25.2	23.2	103	104

1/Includes slaughter in federally inspected and in other slaughter plants, but excludes animals slaughtered on farms. Total may not add due to rounding.

MINK: FEMALES BRED AND MINK PRODUCTION, OHIO, 1986-89

Year	Standard	Pastel	Sapphire	Mahogany	Violet-type	Demi-buff 1/	Misc.	Un-classified	Total	Number of ranches
	Thousand females bred									
1986	17.8	1.9	0.9	1.6	1.1	3.9	5.7		32.8	
1987	19.7	1.6	0.7	2.7		4.5	3.8		33.0	
1988	20.6	1.0	0.2	5.2	0.3	3.9	2.2		33.4	
1989	20.8	0.8	0.2	6.2	0.3		3.6		31.9	
	Thousand pelts produced									
1986	55.1	8.3	3.3	10.4	2.5	22.4	12.0		113.0	27
1987	54.9	5.6	4.8	17.8	1.4	25.3	10.6		120.4	24
1988	72.2	6.1	0.5	30.6	0.6	1.1	15.3		126.4	21

1/This color class includes females bred to produce demi-buff, dark brown, violet, pastel, standard and pearl crosses and others.

CHICKENS: INVENTORY BY CLASSES, OHIO AND UNITED STATES, DECEMBER 1, 1988 AND 1989

	Ohio			United States		
	1988	1989	1989/88	1988	1989	1989/88
	Thousands					
Hens 1 year and older	7,000	8,400	120	122,834	117,296	95
Pullets of laying age	10,450	8,400	81	152,613	153,332	100
Pullets not of laying age, over 3 months old	2,740	2,200	80	33,738	35,767	106
Pullets under 3 months old	2,780	2,800	101	40,859	43,407	106
Other chickens	30	20	67	6,061	5,988	99
Total 1/	23,000	21,820	95	356,105	355,790	100
All chickens, value per head 2/	1.30	1.25	96	2.04	2.16	106
Total value 1/	29,900	27,275	91	726,442	769,527	106

1/ Excludes commercial broilers. 2/ Dollars per head.

CHICKENS: INVENTORY, DISPOSITION, AND INCOME, OHIO AND UNITED STATES, 1988 AND 1989 1/

	Ohio		United States	
	1988	1989	1988	1989
Lost (Thousand head) 2/	2,100	2,000	37,202	35,847
Sold (Thousand head)	11,270	10,000	224,458	198,978
Pounds sold (Thousand pounds)	40,572	37,000	1,038,817	937,156
Price per pound (cents)	12.2	14.6	9.2	14.9
Value of sales (Thousand dollars)	4,950	5,402	95,294	139,943

1/ Data cover both farm and commercial operations, but exclude commercial broilers. 2/ Includes death and other losses during the 12 month period Dec. 1 previous year through Nov. 30.

AVERAGE NUMBER OF LAYERS ON HAND AND EGGS PRODUCED BY MONTHS, OHIO 1988 AND 1989

Month	Layers		Eggs per 100 layers		Eggs produced	
	1988	1989	1988	1989	1988	1989
	Thousands		Number		Millions	
December 1/	17,500	17,376	2,274	2,256	398	392
January	17,790	17,130	2,254	2,236	401	383
February	18,070	16,821	2,075	2,003	375	337
March	17,800	16,681	2,213	2,230	394	337
April	17,640	16,563	2,143	2,131	378	353
May	17,020	16,393	2,209	2,153	376	353
June	16,265	16,435	2,127	2,075	346	341
July	16,155	16,651	2,160	2,198	349	366
August	16,270	16,753	2,145	2,173	349	364
September	16,703	16,811	2,119	2,088	354	351
October	17,091	16,868	2,235	2,223	382	375
November	17,293	16,826	2,169	2,175	375	366
Total	17,129 2/	16,777 2/	261 3/	259 3/	4,477	4,353

1/ December preceding year. 2/ Average for the year. 3/ Total egg production divided by average number of layers on hand.

EGGS: PRODUCTION, DISPOSITION AND INCOME, OHIO AND UNITED STATES, 1988 AND 1989

	Ohio		United States	
	1988	1989	1988	1989
Eggs produced (million eggs)	4,477	4,353	69,655	67,100
Price per dozen (cents)	37.2	50.4	52.8	68.9
Value of production (1,000 dollars)	138,787	182,826	3,066,739	3,853,999

BROILERS: PRODUCTION AND GROSS INCOME, OHIO AND UNITED STATES, 1988 AND 1989 1/

	Ohio		United States 2/	
	1988	1989	1988	1989
Number produced (thousand head)	14,500	16,000	4,800,710	5,036,221
Pounds produced (thousand pounds)	62,350	72,000	20,635,487	21,949,400
Price per pound (cents) 3/	28.5	29.0	33.2	36.6
Value of production (thousand dollars) 4/	17,770	20,880	6,841,186	8,030,688

1/Broiler production including other meat-type breeds. 2/Excludes States producing less than 500,000 birds. 3/ Live weight equivalent price. 4/ Includes home consumption.

TURKEYS: PRODUCTION AND GROSS INCOME, OHIO AND UNITED STATES, 1988 AND 1989

	Ohio		United States	
	1988	1989	1988	1989
Heavy and light breeds raised (thousand head) 1/	3,600	4,100	242,421	260,230
Pounds produced (thousand pounds) 2/	93,600	110,290	5,059,056	5,453,923
Price per pound (cents) 3/	36.0	41.0	38.6	41.1
Value of production (thousand dollars)	33,696	45,219	1,951,349	2,239,058

1/Based on turkeys hatched September 1, previous year through August 31, current year. Excludes young turkeys lost. 2/ Includes home consumption. 3/Live weight equivalent price.

CHICKENS: NUMBER OF HENS AND PULLETS OF LAYING AGE DECEMBER 1, OHIO, 1985-1989

District	HENS AND PULLETS OF LAYING AGE				
	1985	1986	1987	1988	1989
	Thousands				
10	1,750	1,400	1,650	1,410	1,300
20	250	250	260	220	190
30	1,250	1,050	870	750	700
40	5,450	6,400	7,750	7,900	8,080
50	5,600	5,760	5,530	5,770	5,400
60	320	360	350	330	240
70	120	160	180	120	100
80	240	280	820	800	590
90	220	240	190	150	200
State	15,200	15,900	17,600	17,450	16,800

1989 PRICES AND ECONOMIC DATA

AVERAGE PRICES: SELECTED COMMODITIES, OHIO, 1988 AND 1989 1/

Commodity	Unit	1988	1989	Commodity	Unit	1988	1989
		Dollars				Dollars	
Corn for grain	Bu.	2.61	2.35	Cattle	Cwt.	63.70	66.90
Soybeans	Bu.	7.54	5.60	Cows	Cwt.	45.70	47.30
Wheat	Bu.	3.73	3.80	Steers/heifers	Cwt.	68.60	71.30
Oats	Bu.	2.61	1.45	Calves	Cwt.	86.10	87.00
All hay	Ton	117.00	119.00	Sheep	Cwt.	30.00	23.90
Rye	Bu.	4.00	3.50	Lambs	Cwt.	65.10	62.60
Tobacco - all	Lb.	1.598	1.673	Wool	Lb.	0.71	0.74
Burley (31)	Lb.	1.599	1.673	Farm chickens	Lb.	0.122	0.146
Other (42-44)	Lb.	1.040	-	Comm. broilers 3/	Lb.	0.285	0.290
All potatoes	Cwt	6.90	7.50	Turkeys	Lb.	0.360	0.410
Sugar beets	Ton	35.20	2/	Eggs, all	Doz.	0.372	0.504
Apples	Lb.	0.177	0.176	Milk, wholesale, all	Cwt.	12.00	13.40
Peaches	Lb.	0.310	0.340	Milk eligible for fluid market	Cwt.	12.10	13.50
Grapes	Ton	264.00	266.00	Milk, mfg. grade	Cwt.	11.40	12.10
Hogs	Cwt	42.20	42.40	Milk cows 4/	Head	985.	1050.
Sows	Cwt	32.60	33.70				
Barrows & gilts	Cwt	42.70	42.90				

1/Crops are marketing year average price: chickens and hogs, December-November season average price; other items, annual average price. 2/Not available. 3/Live weight equivalent price. 4/For milk herd replacements.

PRICES PAID FOR FEED AND FEED-PRICE RATIOS, CORN BELT 1/, 1988 AND 1989

Item	Jan. 1988	Apr. 1988	Jul. 1988	Oct. 1988	Jan. 1989	Apr. 1989	Jul. 1989	Oct. 1989	Jan. 1990
					Dollars				
Hog feed 14-18% protein	186	189	249	224	217	222	218	208	207
Hog concentrate 38-42% protein	312	308	389	368	357	339	343	322	305
Beef cattle concentrate 32-36% protein	276	266	328	310	310	291	287	285	279
Dairy feed 16% protein	180	176	213	208	208	202	188	189	196
Dairy feed 32% protein	299	300	373	332	340	319	327	309	295
Laying feed	208	200	259	229	235	232	216	224	219
Turkey grower	220	201	270	269	269	253	242	228	230
					RATIO				
Egg-feed ratio 2/	3.08	3.30	2.63	4.54	3.91	5.26	4.54	4.91	6.39
Hog-corn ratio 3/	23.0	21.2	14.6	14.8	15.4	13.9	17.8	19.9	19.3
Milk-feed ratio 4/	1.37	1.30	1.07	1.21	1.31	1.24	1.33	1.52	1.62

1/ Corn Belt Region (Ohio, Illinois, Indiana, Iowa, Missouri). 2/ Pounds of feed equal in value to 1 dozen eggs. 3/ Bushels of corn equal in value to 100 pounds of hog, live weight. Ohio prices used for this ratio. 4/ Pounds of 16% dairy feed equal in value to 1 pound of whole milk.

AVERAGE PRICES PAID BY FARMERS FOR FUELS IN CORN BELT STATES 1/

Item	Jan 1988	Apr 1988	July 1988	Oct 1988	Jan 1989	Apr 1989	July 1989	Oct 1989	Jan 1990
					Dollars per gallon				
Gas, Retail, unleaded	.880	.890	.930	.910	.890	1.07	1.10	1.03	1.06
Gas, Bulk, leaded reg.	.890	.920	.950	.920	.920	1.10	1.12	1.07	1.11
Diesel, bulk delivery	.750	.760	.740	.680	.730	.810	.750	.810	1.05
L.P. gas bulk delivery	.560	.550	.530	.520	.530	.540	.530	.510	1.08

1/ Illinois, Indiana, Iowa, Missouri, Ohio.

PRICES RECEIVED BY FARMERS: SELECTED COMMODITIES, BY MONTHS, OHIO, 1988 AND 1989 1/

Commodity and year	Unit	Jan.	Feb.	Mar.	Apr.	May	Jun.
				Dollars			
CORN							
1988	Bu.	1.86	1.92	1.95	1.96	2.03	2.72
1989		2.64	2.64	2.65	2.64	2.65	2.63
SOYBEANS							
1988	Bu.	5.93	6.14	6.30	6.65	7.26	8.50
1989		7.79	7.47	7.39	7.42	7.30	7.21
WHEAT							
1988	Bu.	3.08	3.12	2.80	2.98	2.98	3.43
1989		4.18	4.16	4.11	3.94	3.93	3.80
OATS							
1988	Bu.	1.85	1.88	1.87	1.80	1.87	2.46
1989		2.64	2.48	2.47	2.37	2.18	1.90
ALL HAY							
1988	Ton	86.00	87.00	92.00	92.00	92.00	91.00
1989		125.00	120.00	125.00	125.00	134.00	131.00
ALFALFA HAY							
1988	Ton	90.00	90.00	95.00	95.00	95.00	100.00
1989		130.00	125.00	130.00	130.00	140.00	140.00
OTHER HAY							
1988	Ton	70.00	70.00	75.00	75.00	75.00	75.00
1989		75.00	70.00	75.00	75.00	80.00	80.00
ALL POTATOES							
1988	Cwt.	5.60	6.20	6.30	-	-	-
1989		7.95	9.25	8.45	-	-	-
HOGS							
1988	Cwt.	42.70	44.90	41.70	41.60	46.50	46.70
1989		40.70	40.20	39.00	36.70	41.00	45.20
SOWS							
1988	Cwt.	33.10	34.90	34.40	35.00	36.50	32.50
1989		32.00	33.40	33.70	29.90	32.50	33.00
BARROWS & GILTS							
1988	Cwt.	43.20	45.50	42.20	41.90	47.20	47.90
1989		41.30	40.60	39.30	37.10	41.60	46.00
CATTLE, ALL BEEF							
1988	Cwt.	59.40	61.70	63.80	66.10	68.20	60.80
1989		63.90	66.10	68.90	69.70	69.20	66.80
COWS							
1988	Cwt.	45.20	47.80	47.40	48.50	49.20	43.20
1989		45.20	48.30	46.60	46.20	47.00	48.00
STEERS & HEIFERS							
1988	Cwt.	64.00	66.40	69.10	70.60	71.80	67.20
1989		70.00	71.20	74.60	73.10	72.40	70.10
CALVES							
1988	Cwt.	85.00	88.80	90.10	89.30	95.70	85.10
1989		88.90	94.40	93.50	89.90	87.80	99.80
SHEEP							
1988	Cwt.	45.80	35.40	33.60	32.10	31.60	27.40
1989		32.00	33.60	27.10	20.50	19.10	24.70
LAMBS							
1988	Cwt.	79.10	78.90	83.10	76.40	71.90	56.40
1989		64.60	66.00	75.30	78.80	71.10	64.00
WOOL							
1988	Lb.	.560	.610	.630	.680	.700	.760
1989		.700	.760	.740	.670	.670	.670
EGGS							
1988	Doz.	.320	.330	.310	.330	.280	.280
1989		.460	.470	.470	.610	.450	.450
ALL MILK							
1988	Cwt.	12.30	12.00	11.80	11.50	11.40	11.30
1989		13.70	13.40	12.80	12.50	12.30	12.40
MILK, FLUID MARKET							
1988	Cwt.	12.40	12.10	11.80	11.60	11.50	11.40
1989		13.80	13.60	13.00	12.60	12.40	12.50
MILK, MFG. GRADE							
1988	Cwt.	11.70	11.50	11.50	11.00	11.00	10.70
1989		12.70	11.80	11.40	11.60	11.10	11.10
MILK COWS 2/							
1988	Head	1000.00			1040.00		
1989		1000.00			1050.00		

1/ 1989 data is preliminary. 2/For replacement dairy stock.

PRICES RECEIVED BY FARMERS: SELECTED COMMODITIES, BY MONTHS, OHIO, 1988 AND 1989 (CONT)

Commodity and year	Unit	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
				Dollars			
CORN							
1988	Bu.	3.00	2.86	2.82	2.62	2.53	2.58
1989		2.56	2.46	2.44	2.34	2.33	2.39
SOYBEANS							
1988	Bu.	8.81	8.38	8.21	7.46	7.43	7.40
1989		7.01	6.18	5.98	5.55	5.72	5.75
WHEAT							
1988	Bu.	3.52	3.64	3.83	3.92	3.99	4.07
1989		3.72	3.74	3.75	3.85	3.90	3.95
OATS							
1988	Bu.	2.70	2.72	2.91	2.45	2.64	2.70
1989		1.49	1.38	1.38	1.30	1.53	1.58
ALL HAY							
1988	Ton	149.00	111.00	93.00	100.00	125.00	125.00
1989		111.00	102.00	104.00	109.00	116.00	121.00
ALFALFA HAY							
1988	Ton	175.00	120.00	100.00	110.00	130.00	130.00
1989		125.00	115.00	115.00	120.00	125.00	130.00
OTHER HAY							
1988	Ton	110.00	90.00	75.00	70.00	80.00	80.00
1989		70.00	70.00	70.00	75.00	80.00	85.00
ALL POTATOES							
1988	Cwt.	-	5.35	5.00	5.65	7.20	8.75
1989		-	8.50	6.95	6.25	7.70	8.80
HOGS							
1988	Cwt.	43.80	44.80	40.60	38.90	36.30	40.10
1989		45.60	45.40	43.30	46.60	44.50	48.30
SOWS							
1988	Cwt.	29.70	33.90	31.70	30.20	26.20	27.60
1989		33.40	35.20	35.60	38.80	36.30	38.40
BARROWS & GILTS							
1988	Cwt.	44.60	45.60	41.00	39.40	36.90	40.70
1989		46.40	46.20	43.80	47.20	44.90	48.80
CATTLE, ALL BEEF							
1988	Cwt.	58.20	64.10	67.30	66.50	62.80	63.00
1989		65.60	65.40	65.70	67.00	66.50	66.90
COWS							
1988	Cwt.	43.50	45.60	45.60	44.50	43.30	44.90
1989		47.80	47.70	48.30	47.00	46.70	49.80
STEERS & HEIFERS							
1988	Cwt.	63.40	67.30	71.20	70.90	68.70	68.80
1989		70.00	69.80	69.90	70.60	71.20	72.20
CALVES							
1988	Cwt.	81.50	87.80	87.60	82.80	80.40	83.30
1989		89.90	89.20	88.00	82.30	80.20	81.20
SHEEP							
1988	Cwt.	28.20	23.00	23.70	23.40	23.20	27.50
1989		22.40	23.20	20.40	20.80	26.00	25.50
LAMBS							
1988	Cwt.	52.00	53.20	66.60	58.40	61.60	67.60
1989		60.80	58.70	57.90	57.70	57.70	56.10
WOOL							
1988	Lb.	.820	.710	.720	.740	.680	.780
1989		.670	.610	.610	.450	.450	.450
EGGS							
1988	Doz.	.340	.430	.440	.520	.480	.430
1989		.490	.510	.510	.550	.580	.670
ALL MILK							
1988	Cwt.	11.40	11.70	12.10	12.60	13.00	13.10
1989		12.50	12.90	13.60	14.40	15.20	15.90
MILK, FLUID MARKET							
1988	Cwt.	11.50	11.80	12.10	12.60	13.00	13.20
1989		12.60	13.00	13.70	14.50	15.30	16.10
MILK, MFG. GRADE							
1988	Cwt.	10.40	10.70	11.60	12.00	12.40	12.40
1989		11.30	11.50	12.40	13.60	14.00	14.10
MILK COWS							
1988	Head	900.00			1000.00		
1989		1070.00			1080.00		

NONREAL ESTATE FARM DEBT OUTSTANDING (including operator households), OHIO DECEMBER 1, 1984-88 1/

YEAR	DEBT OWED TO REPORTING INSTITUTIONS (excluding CCC)				DEBT OWED TO INDIVIDUALS AND OTHERS	TOTAL EXCLUDING CCC LOANS	PRICE SUPPORT & STORAGE LOAN MADE OR GUARANTEED BY CCC	TOTAL INCLUDING CCC LOANS
	ALL OPERATING BANKS	PROD. CREDIT ASSOC.	FEDERAL INTERMEDIATE CREDIT BANKS	FARMERS HOME ADMIN.				
	MILLION DOLLARS							
1984	624	475	16	286	475	1,876	108	1,984
1985	554	299	10	328	401	1,592	468	2,060
1986	515	275	0	318	326	1,434	482	1,916
1987	499	236	0	299	280	1,314	325	1,639
1988	545	231	2/	275	285	1,335	118	1,453

Source: Economic Indicators of the Farming Sector, State Financial Summary, 1988 1/ Numbers may not add because of rounding.2/Production Credit Association and Federal intermidiate credit bank loans are now combined and shown in the column for PCA loans.

REAL ESTATE DEBT OUTSTANDING (including operator household), OHIO DECEMBER 1, 1984-88 1/

YEAR	FEDERAL LAND BANKS	HOME ADMIN.	INSURANCE COMPANIES	OPERATING BANKS	INDI- AND OTHERS	CCC AND DRYING LOANS	TOTAL
	MILLION DOLLARS						
1984	1,345	196	277	464	762	18	3,062
1985	1,119	213	239	500	693	9	2,773
1986	894	220	198	559	611	4	2,487
1987	730	218	165	593	525	1	2,232
1988	715	214	150	629	459	0	2,166

Source: Economic Indicators of the Farm Sector, State Financial Summary, 1988 1/ Numbers may not add because of rounding.

INDEXES OF PRICES RECEIVED BY FARMERS, CONSUMER PRICE INDEX, AND PRODUCER PRICE INDEX, U.S., 1988 AND 1989

Month	All Farm products		Lvstk. & lvstk. products 2/		All crops 1/		Consumer (CPI)		Producer (wholesale)	
	1988	1989	1988	1989	1988	1988	1988	1989	1988	1989
	1977=100						1982-84=100		1982=100	
January	131	149	147	158	114	141	116	121	106	111
February	130	149	149	158	109	139	116	122	106	112
March	130	149	148	161	111	136	117	122	106	112
April	130	147	148	154	112	140	117	123	107	113
May	134	149	151	156	117	141	118	124	108	114
June	139	147	147	157	129	138	118	124	108	114
July	142	147	147	157	137	137	119	124	109	114
August	144	145	152	161	136	128	119	125	109	113
September	144	144	153	160	135	126	120	125	109	114
October	143	145	152	162	133	128	120	126	109	115
November	144	147	151	165	136	128	120	126	110	115
December	145	149	154	170	136	127	121	126	110	115

1/Includes indexes for major crops, fruit, potatoes and vegetables. 2/ Includes wool price index.

FARM INCOME STATEMENT OF OHIO, 1986 TO 1988 AND U.S. 1987, 1988

Gross farm income	Ohio 1986	Ohio 1987	Ohio 1988	United States 1987	United States 1988
			Million dollars		
Gross farm income 1/	4,135.7	4,189.6	4,122.5	171,624.4	177,625.2
Cash income	3,909.5	3,967.8	4,068.6	162,023.3	171,577.6
Farm marketings	3,587.4	3,477.8	3,629.0	139,468.4	151,430.8
Crops	2,001.8	1,862.0	2,024.7	63,751.4	72,569.0
Livestock and products	1,585.5	1,615.8	1,604.2	75,717.0	78,861.7
Government payments	269.0	431.9	381.9	16,746.7	14,479.8
Other farm income	53.2	58.1	57.8	5,808.1	5,667.0
Machine hire/customwork	14.9	23.0	20.5	831.4	740.7
Other farm-related income 2/	38.3	35.1	37.3	4,976.8	4,926.4
Noncash income	314.8	298.7	313.1	9,978.3	10,317.9
Value of home consumption	30.2	31.4	31.4	835.6	810.4
Rental value of dwellings	284.6	267.3	281.7	9,142.7	9,507.5
Operator dwellings	281.9	264.7	279.2	9,009.3	9,380.4
Hired laborer dwellings	2.6	2.6	2.5	133.4	127.1
Value of inventory adjustment	-88.5	-76.9	-259.2	-377.2	-4,270.3
Total production expenses 1/	3,326.1	3,257.1	3,355.8	124,499.1	131,963.5
Intermediate product expenses	1,732.7	1,740.6	1,812.1	69,416.7	76,262.5
Farm origin	551.3	569.7	613.9	31,752.4	36,913.0
Feed purchased	351.2	358.9	424.8	16,898.2	20,962.3
Livestock and poultry purchased	68.5	78.0	50.7	11,845.0	12,812.3
Seed purchased	131.6	132.7	138.4	3,009.3	3,138.3
Manufactured inputs	599.5	580.8	610.6	17,032.6	18,232.7
Fertilizer and lime	265.3	242.3	260.5	5,609.5	6,400.3
Pesticides	146.5	149.9	154.1	4,587.7	4,716.2
Fuel and oil	139.6	129.4	132.4	4,442.3	4,543.7
Electricity	48.0	59.2	63.6	2,393.1	2,572.5
Other	581.9	590.1	587.5	20,631.7	21,116.8
Repair and maintenance	245.7	246.9	260.7	6,546.0	6,858.0
Other miscellaneous 3/	336.1	343.2	326.8	14,085.7	14,258.8
Interest	399.7	360.6	353.9	15,492.0	15,172.2
Real estate	240.8	213.0	206.5	8,186.8	7,885.0
Nonreal estate	158.9	147.6	147.3	7,305.2	7,287.2
Contract and hired labor expenses	181.4	198.1	205.1	10,821.3	11,202.0
Cash labor expenses 4/	173.2	188.2	195.5	10,316.0	10,713.6
Perquisites	8.2	10.0	9.6	505.3	488.4
Net rent to nonoperator landlords 5/	200.9	202.6	211.2	7,059.5	7,527.1
Capital consumption	692.0	628.3	646.4	17,364.2	17,421.6
Property taxes	119.4	127.0	127.2	4,345.2	4,378.1
NET FARM INCOME	809.6	932.5	766.6	47,125.3	45,661.7
Cash income 6/	3,909.5	3,967.8	4,068.6	162,023.3	171,577.6
Cash expenses 6/	2,558.4	2,550.6	2,628.5	104,334.9	111,678.9
Intermediate product expenses	1,692.5	1,699.4	1,767.6	68,031.2	74,776.1
Interest	381.0	342.6	336.3	14,889.3	14,591.4
Cash labor expenses 4/	173.2	188.2	195.5	10,316.0	10,713.6
Net rent to nonoperator landlords 5/	200.9	202.6	211.2	7,059.5	7,527.1
Property taxes	110.9	117.9	118.0	4,038.8	4,070.8
NET CASH INCOME	1,351.1	1,417.2	1,440.1	57,688.4	59,898.7
Cash income	3,909.5	3,967.8	4,068.6	162,023.3	171,577.6
Cash expenses	2,558.4	2,550.6	2,628.5	104,334.9	111,678.9
Capital consumption	601.1	540.8	557.9	14,420.7	14,464.7
NET BUSINESS INCOME 7/	750.0	876.4	882.2	43,267.8	45,434.0
Gross receipts of farms 8/	3,853.8	3,924.9	3,843.3	162,615.1	168,244.8
Nonfactor payments 6/	2,404.5	2,358.1	2,443.5	86,490.7	93,311.5
Intermediate product expenses	1,692.5	1,699.4	1,767.6	68,031.2	74,776.1
Capital consumption	601.1	540.8	557.9	14,420.7	14,464.7
Property taxes	110.9	117.9	118.0	4,038.8	4,070.8

FARM INCOME STATEMENT OF OHIO, 1986 TO 1988 AND U.S. 1987, 1988

Gross farm income	Ohio 1986	Ohio 1987	Ohio 1988	United States 1987	United States 1988
	MILLION DOLLARS				
Factor payments 6/	1,449.3	1,566.8	1,399.8	76,124.4	74,933.2
Interest	381.0	342.6	336.3	14,889.3	14,591.4
Contract and hired labor expenses	181.4	198.1	205.1	10,821.3	11,202.0
Net rent to nonoperator landlords 5/	200.9	202.6	211.2	7,059.5	7,527.1
RETURNS TO OPERATORS 9/	686.1	823.6	647.3	43,354.2	41,612.8
Off-farm income 10/	2,042.2	2,139.6	2,364.6	46,769.4	51,687.6
	NUMBER				
Number of farms	88,000	84,000	85,000	2,212,960	2,197,140

1/ Includes operator dwellings. 2/ Includes forest product sales, recreational income, and other farm business-related income. Estimates for 1982 and later include income from custom feeding services. 3/ Includes machine hire and customwork expenses; marketing, storage, and transportation expenses; and miscellaneous expenses. Definitions and data sources for 1978 and later are not directly compatible with those of earlier years. 4/ Includes contract labor expenses, hired labor wages, and Social Security payments. 5/ Uses different data sources for periods before 1979, 1979-83, and 1984 and later. Estimates are not directly compatible among periods. 6/ Excludes operator dwellings. 7/ Cash income less cash expenses and capital consumption. 8/ Gross farm income less rental value of operator dwellings. 9/ Gross receipts of farms less nonfactor payments, interest, contract and hired labor expenses, and net rent to nonoperator landlords. 10/ Includes off-farm income for members of farm operator dwellings only. *Items may not calculate because of rounding.

FARM ASSETS, DEBTS AND RATIOS OHIO 1986 TO 1988, U.S. 1987, 1988

	OHIO 12/31/86	OHIO 12/31/87	OHIO 12/31/88	UNITED STATES 12/31/87	UNITED STATES 12/31/88
	MILLION DOLLARS				
Farm assets:					
Real Estate	14,890.9	15,461.0	16,388.7	562,746.9	592,216.7
Livestock & Poultry	1,053.3	1,225.4	1,293.6	57,876.1	65,672.3
Machinery & Motor Vehicles	3,137.9	2,834.3	2,913.9	78,583.0	79,328.0
Crops	651.3	720.0	1,078.4	20,903.7	26,197.1
Household equip.& furnishings	890.0	977.5	1,162.2	32,893.0	38,837.0
Financial assets	1,972.8	2,043.1	2,166.7	56,750.0	58,475.2
Total Farm assets	22,596.2	23,261.3	25,003.5	809,752.7	860,726.3
Farm debt:					
Real Estate debt	2,486.6	2,232.1	2,166.4	87,717.6	82,952.5
Non-real estate debt	1,434.5	1,313.7	1,334.9	65,997.4	65,588.3
CCC loans	485.0	NA	NA	14,896.0	8,423.0
Total Farm debt 1/	3,921.1	3,545.8	3,501.3	153,715.0	148,540.8
Equity	18,675.1	19,715.5	21,502.2	656,037.7	712,185.5
Debt/assets ratio	17.4	15.2	14.0	19.0	17.3
Debt/equity ratio	21.0	18.0	16.3	23.4	20.9
Net farm income/debt ratio 2/ 3/	20.6	26.3	21.9	30.7	30.7

1/ Excludes CCC loans. 2/ Net farm income after inventory adjustment. 3/ Calculated using end of year debt.

VALUE OF EXPORT SHARES 1/ OF AGRICULTURAL COMMODITIES, OHIO AND U.S., FISCAL YEARS 1986-89

Year ended Sept 30	Wheat and products	Feed Grains and products 2/	Soybeans and products 3/	Tobacco unmfd	Fruits and preps	Vegetables and preps	Feeds and fodder	Seeds
			MILLION DOLLARS					
			OHIO					
1986	102.8	266.3	426.9	8.7	3.5	24.0	19.5	7.3
1987	69.7	247.6	434.7	9.5	2.5	26.7	23.0	7.4
1988	75.1	296.8	519.2	9.3	5.0	27.9	30.8	8.3
1989	152.0	399.6	372.4	11.2	5.3	32.9	37.3	10.0
			UNITED STATES					
1986	3,546.8	4,707.2	5,578.5	1,317.5	1,237.0	998.2	557.0	366.4
1987	3,115.6	4,662.3	5,752.9	1,203.1	1,466.2	1,175.8	671.9	371.1
1988	4,675.1	6,228.5	6,972.2	1,297.1	1,714.1	1,280.5	874.3	414.7
1989	6,292.0	8,345.8	5,773.5	1,273.9	1,800.3	1,545.7	1,061.1	500.1

Year	Live animals and meat ex poultry	Hides and skins 4/	Poultry and products	Fats oils and greases	Dairy products	Other 5/	Total
			MILLION DOLLARS				
			OHIO				
1986	22.3	21.4	10.7	7.8	12.0	24.2	957.4
1987	24.2	21.5	12.5	6.0	13.4	25.9	924.7
1988	34.0	24.4	14.4	7.7	12.8	30.5	1,096.2
1989	39.9	20.2	16.1	6.5	11.3	45.7	1,160.4
			UNITED STATES				
1986	1,356.7	1,440.4	455.3	476.5	431.0	3,838.4	26,306.9
1987	1,630.2	1,665.6	594.3	416.8	490.6	4,659.7	27,876.2
1988	2,248.6	1,836.8	647.4	544.6	535.5	6,109.3	35,378.7
1989	2,829.8	1,713.0	728.2	530.8	474.7	6,782.0	39,651.0

1/The export shares for Ohio were derived from the State's contribution to national output. They do not show actual State exports, but instead reflect the prorated stake in the national export total. 2/Includes corn, barley, oats, grain sorghum and other coarse grain products. 3/Soybeans, soybean meal, and soybean oil. 4/Distribution of furskins to the State prorated level includes mink pelts. 5/Other includes rice, sunflower seed and oil, peanuts and products, cotton and linters, cotton-seed and products and tree nuts which were listed separately for U.S. but which are not estimated for Ohio. Also includes other products estimated for Ohio and the U.S. but not listed above.

VALUE OF U.S. FOREIGN TRADE AND TRADE BALANCE, (AGRICULTURAL AND TOTAL)-OCT.-SEPT. 1986-89

	Agriculture Trade					Total Trade		
Year	Ag. Exports	Ag. share of Total	Ag. Imports	Ag. share of total	Ag. Trade balance	Total Exports 1/	Total Imports 2/	Total Trade balance
	Mil. $	Percent	Mil. $	Percent		Million $		
1986	26,307	13	20,875	6	5,432	202,938	363,730	-160,792
1987	27,876	12	20,650	5	7,226	230,787	388,024	-157,237
1988	35,379	12	21,014	5	14,365	293,972	430,152	-136,180
1989	39,651	12	21,479	5	18,172	342,158	462,551	-120,393

1/ Domestic exports. 2/ Imports for consumption, customs value basis. Source: Foreign Agricultural Trade of the United States November/December 1989. Fiscal Year 1989.

WEATHER STATIONS

Location	Abbreviations
NORTHWEST	
Hoytville	HYTVL
Fremont	FREMT
Willard	WLLRD
NORTHEAST	
Canfield-Mahoning	CNFLD
Wooster	WOSTR
Grape Branch	
CENTRAL	
Celina	CLINA
Columbus	CMH

Location	Abbreviations
SOUTHWEST	
Ripley	RIPLY
South Charleston	SCHSN
Wilmington	WLMGT
Oxford	OXF
SOUTHEAST	
Caldwell	CLDWL
Jackson	JCKSN
Delaware	DEL
Circleville	CRCVL

MONTHLY PRECIPITATION AND DEVIATIONS FOR 1989 IN INCHES 1/

MONTH	HOYTVILLE MONTH	DEV	ACCUM	ACCUM DEV	FREMONT MONTH	DEV	ACCUM	ACCUM DEV	WILLARD MONTH	DEV	ACCUM	ACCUM DEV
APR	3.32	.38	3.32	.38	3.66	.72	3.66	.72	3.73	.79	3.73	.79
MAY	5.31	2.27	8.63	2.65	5.79	2.75	9.45	3.47	5.89	2.85	9.62	3.64
JUN	4.28	1.34	12.91	3.99	4.50	1.56	13.95	5.03	5.75	2.81	15.37	6.45
JUL	2.43	-.61	15.34	3.38	1.38	-1.66	15.33	3.37	4.09	1.05	19.46	7.50
AUG	1.50	-1.28	16.84	2.10	1.75	-1.29	17.08	2.08	1.75	-1.29	21.21	6.21
SEP	2.86	.90	19.70	3.00	3.35	1.29	20.43	3.37	2.69	.04	23.90	6.25
OCT	1.98	-.05	21.68	2.95	2.55	1.05	22.98	4.42	2.49	.46	26.39	6.72
NOV	1.95	-.01	23.63	2.94	2.97	1.01	25.95	5.43	3.54	1.58	29.93	8.30
	GRAPE BRANCH				CANFIELD				CELINA			
APR	2.15	-.79	2.15	-.79	1.20	-1.74	1.20	-1.74	5.76	2.82	5.76	2.82
MAY	7.31	4.27	9.46	3.48	6.17	3.13	7.37	1.39	3.94	.90	9.70	3.72
JUN	5.26	2.32	14.72	5.80	8.57	5.56	15.94	6.95	3.20	.26	12.90	3.98
JUL	1.49	-1.55	16.21	4.25	1.42	-2.47	17.36	4.48	4.80	1.76	17.70	5.74
AUG	3.26	.22	19.47	4.47	1.84	-1.20	19.20	3.28	5.03	2.94	22.73	8.68
SEP	3.91	.97	23.38	5.44	3.77	1.12	22.97	4.41	3.67	1.68	26.40	10.35
OCT	3.73	.69	27.11	6.13	1.93	-.10	24 .90	4.31	2.36	.33	28.76	10.69
NOV	4.33	1.39	31.44	7.52	2.19	.23	27.09	4.54	2.17	.21	30.93	10.90
	DELAWARE				WOOSTER				S CHARLESTON			
APR	3.85	.91	3.85	.91	1.78	-1.16	1.78	-1.16	5.11	2.17	5.11	2.17
MAY	4.48	1.44	8.33	2.35	4.50	1.46	6.28	.30	5.46	1.93	10.57	4.10
JUN	3.91	.97	12.24	3.32	7.20	4.26	13.48	4.56	7.04	4.07	17.61	8.17
JUL	4.91	1.54	17.15	4.86	1.67	-2.15	15.15	2.40	4.71	.79	22.32	8.95
AUG	2.67	-.37	19.82	4.49	.90	-2.17	16.05	.23	3.19	.15	25.51	9.10
SEP	1.65	-.57	21.47	3.92	4.41	1.80	20.46	2.03	1.93	-.46	27.44	8.65
OCT	1.86	-.17	23.33	3.75	2.55	.52	23.01	2.55	1.49	-.54	28.93	8.11
NOV	2.16	.20	25.49	3.95	1.54	-.42	24.55	2.13	2.62	.66	31.55	8.77
	CIRCLEVILLE				CALDWELL				OXFORD			
APR	5.22	2.28	5.22	2.28	4.38	1.44	4.38	1.44	3.31	.37	3.31	.37
MAY	7.04	3.74	12.26	6.02	5.05	1.95	9.43	3.38	5.99	2.95	9.30	3.32
JUN	4.46	1.52	16.72	7.54	6.34	2.42	15.77	5.80	5.52	2.42	14.82	5.74
JUL	6.37	2.51	23.09	10.05	2.29	-1.76	18.06	4.04	2.14	-1.75	16.96	3.99
AUG	3.83	.69	26.92	10.74	2.15	-1.15	20.21	2.89	3.92	.88	20.88	4.87
SEP	4.03	1.35	30.95	12.09	3.51	1.06	23.72	3.95	3.63	.98	24.51	5.85
OCT	3.34	1.31	34.29	13.41	2.75	.72	26.47	4.67	1.24	-.79	25.75	5.06
NOV	3.51	1.55	37.80	14.96	1.65	-.31	28.12	4.36	2.53	.57	28.28	5.63
	RIPLEY				WILMINGTON				JACKSON			
APR	4.48	1.41	4.48	1.41	6.51	2.59	6.51	2.59	5.42	2.18	5.42	2.18
MAY	5.04	2.00	9.52	3.41	5.52	1.47	12.03	4.06	3.53	.49	8.95	2.68
JUN	5.89	2.95	15.41	6.36	3.38	-.54	15.41	3.51	4.62	1.58	13.57	4.26
JUL	7.61	3.62	23.02	9.98	4.34	.61	19.75	4.13	4.88	.83	18.45	5.08
AUG	3.09	-.60	26.11	9.38	2.51	-.53	22.26	3.60	4.86	1.40	23.31	6.48
SEP	2.74	-.04	28.85	9.34	3.28	.53	25.54	4.13	3.63	.79	26.94	7.27
OCT	4.19	2.16	33.04	11.50	1.73	-.30	27.27	3.84	4.52	2.49	31.46	9.76
NOV	3.38	.80	36.42	12.30	2.87	.03	30.14	3.87	2.09	.13	33.55	9.89

1/ DEVIATIONS FROM NORMAL RAINFALL ARE DERIVED USING THE AVERAGE RAINFALL OVER A 30-YEAR PERIOD. THESE NORMALS ARE UPDATED EACH DECADE, AND WEATHER STATIONS WITHOUT DEVIATIONS HAD LESS THAN 30 YEARS OF DATA DURING THE PERIOD 1951-80.

MONTHLY GROWING DEGREE DAYS, (BASE 50) SEASON ACCUMULATION, DEVIATIONS FROM NORMAL, 1/1989

MONTH	HOYTVILLE MONTH	DEV	ACCUM	ACCUM DEV	FREMONT MONTH	DEV	ACCUM	ACCUM DEV	WILLARD MONTH	DEV	ACCUM	ACCUM DEV
APR	130	-42	130	-42	88	-26	88	-26	102	-55	102	-55
MAY	322	-39	452	-81	265	-52	353	-78	253	-76	355	-131
JUN	577	-22	1029	-103	565	-18	918	-96	523	-13	878	-144
JUL	723	-6	1752	-109	715	-20	1633	-116	670	12	1548	-132
AUG	620	-48	2372	-157	620	-66	2253	-182	599	-14	2147	-146
SEP	434	-22	2806	-179	414	-45	2667	-227	430	18	2577	-128
OCT	271	33	3077	-146	263	61	2930	-166	250	34	2827	-94
NOV	56	28	3133	-118	54	34	2984	-132	54	31	2881	-63
	GRAPE BRANCH				CANFIELD				CELINA			
APR	83	-15	83	-15	143	-22	143	-22	167	-19	167	-19
MAY	272	-7	355	-22	298	-35	441	-57	514	140	681	121
JUN	495	-21	850	-43	519	17	960	-40	117	-480	798	-359
JUL	652	-11	1502	-54	694	70	1654	30	754	29	1552	-330
AUG	584	-50	2086	-104	617	26	2271	56	666	-4	2218	-334
SEP	405	-36	2491	-140	504	100	2775	156	474	21	2692	-313
OCT	237	23	2728	-117	301	81	3076	237	316	74	3008	-239
NOV	68	37	2796	-80	93	68	3169	305	71	41	3079	-198
	DELAWARE				WOOSTER				S CHARLESTON			
APR	166	-12	166	-12	136	-1	136	-1	168	-26	168	-26
MAY	333	-17	499	-29	304	0	440	-1	331	-40	499	-66
JUN	584	23	1083	-6	549	50	989	49	593	9	1092	-57
JUL	741	45	1824	39	712	81	1701	130	764	57	1856	0
AUG	673	32	2497	71	625	38	2326	168	671	12	2527	12
SEP	481	52	2978	123	461	78	2787	246	472	19	2999	31
OCT	285	53	3263	176	262	68	3049	314	282	40	3281	71
NOV	76	44	3339	220	82	66	3131	380	83	49	3364	120
	CIRCLEVILLE				CALDWELL				OXFORD			
APR	138	-99	138	-99	169	-56	169	-56	207	-44	207	-44
MAY	314	-111	452	-210	322	-59	491	-115	350	-85	557	-129
JUN	537	-103	989	-313	583	20	1074	-95	594	-61	1151	-190
JUL	680	-86	1669	-399	739	59	1813	-36	718	-51	1869	-241
AUG	551	-170	2220	-569	667	14	2480	-22	697	-29	2566	-270
SEP	415	-96	2635	-665	502	48	2982	26	490	-29	3056	-299
OCT	245	-41	2880	-706	276	16	3258	42	307	13	3363	-286
NOV	97	35	2977	-671	99	50	3357	92	97	28	3460	-258
	RIPLEY				WILMINGTON				JACKSON			
APR	212	-38	212	-38	155	-44	155	-44	239	6	239	6
MAY	336	-83	548	-121	293	-84	448	-128	348	-44	587	-38
JUN	596	-22	1144	-143	565	-25	1013	-153	612	45	1199	7
JUL	737	-4	1881	-147	720	10	1733	-143	754	51	1953	58
AUG	673	-36	2554	-183	624	-43	2357	-186	695	36	2648	94
SEP	478	-21	3032	-204	437	-19	2794	-205	516	62	3164	156
OCT	297	15	3329	-189	288	40	3082	-165	303	32	3467	188
NOV	107	34	3436	-155	87	49	3169	-116	132	65	3599	253

1/ DEVIATIONS FROM NORMAL GROWING DEGREE DAYS (GDD) ARE DERIVED USING GDD OVER A 30-YEAR PERIOD. THESE NORMALS ARE UPDATED EACH DECADE, AND STATIONS WITHOUT DEVIATIONS HAD LESS THAN 30 YEARS OF DATA DURING THE PERIOD 1951-80.

LAST OCCURANCE OF CRITICAL FAHRENHEIT TEMPERATURES IN SPRING 1989

STATIONS	20		24		28		30		32		36		40		43	
	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY
HOYTVILLE	4	10	4	11	4	23	5	7	5	7	5	8	5	28	5	28
FREMONT	4	10	4	11	4	11	4	24	5	8	5	8	5	8	5	28
WILLARD	4	11	4	12	4	25	5	8	5	8	5	9	5	16	5	29
CELINA	3	23	4	11	4	12	5	8	5	8	5	8	6	6	6	6
S CHARLESTON	3	19	4	11	4	13	5	7	5	7	5	7	5	14	5	16
RIPLEY	3	7	4	12	4	12	4	14	5	7	5	8	5	16	5	17
WOOSTER	4	10	4	10	4	24	4	24	4	24	5	7	5	28	5	29
CANFIELD	4	12	4	24	4	24	4	24	5	4	5	28	5	29	6	11
CALDWELL	3	22	4	11	4	14	4	14	4	16	5	7	5	7	5	28
JACKSON	4	11	4	14	4	14	4	20	4	20	5	12	5	28	5	28
GRAPE BRANCH	3	22	4	10	4	24	4	24	4	24	5	7	5	28	5	28
WILMINGTON	3	9	4	11	4	12	4	12	5	8	5	8	5	9	5	12
CIRCLEVILLE	2	22	4	11	4	17	5	7	5	7	5	8	5	12	5	17
OXFORD	3	22	4	11	4	14	4	14	5	7	5	8	5	8	5	28
DELAWARE	3	22	4	10	4	14	4	20	5	7	5	7	5	14	5	28

FIRST OCCURANCE OF CRITICAL FAHRENHEIT TEMPERATURES IN FALL 1989

STATIONS	20		24		28		30		32		36		40		43	
	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY	MO.	DAY
HOYTVILLE	11	17	10	9	10	4	9	24	9	24	9	23	9	23	8	8
FREMONT	11	17	11	17	10	9	10	4	10	4	9	24	9	24	9	23
WILLARD	11	18	11	18	10	5	8	22	8	22	8	22	8	22	8	22
CELINA	11	17	11	17	10	10	10	10	9	25	9	25	9	24	9	24
S CHARLESTON	11	17	11	16	10	4	10	4	9	24	9	23	9	23	9	23
RIPLEY	11	17	11	4	10	9	10	9	10	4	9	24	9	24	9	23
WOOSTER	11	18	11	3	10	9	10	8	9	27	9	24	9	24	9	23
CANFIELD	11	18	11	3	10	23	10	22	9	27	9	24	8	9	8	8
CALDWELL	11	18	11	17	10	9	10	9	10	9	9	24	9	23	9	23
JACKSON	11	18	11	3	10	22	10	22	10	5	9	24	9	23	8	8
GRAPE BRANCH	11	19	11	17	11	4	11	4	11	4	9	25	9	25	9	23
WILMINGTON	11	17	11	4	11	4	10	9	10	4	9	24	9	24	9	24
CIRCLEVILLE	11	19	11	6	10	4	10	4	9	24	9	1	9	1	8	8
OXFORD	11	17	11	16	10	22	10	9	10	4	10	4	9	23	9	23
DELAWARE	11	17	11	17	11	3	10	4	10	4	9	24	9	24	9	23

CORN: Development by selected dates, Ohio, 1989, 1988 and 1984-88 average

Date	Planted			Silked			Dent		
	1989	1988	Average	1989	1988	Average	1989	1988	Average
	Percent			Percent			Percent		
Apr. 30	6	38	29						
May 5	9	66	48						
10	11	81	64						
15	14	89	73						
20	19	93	78						
25	28	98	83						
30	40	100	88						
Jun. 5	53		91						
10	62		92						
15	68		94						
20	74		95						
Jul. 10					6				
15				2	14	31			
20				9	34	49			
25				23	53	64			
30				42	71	77			
Aug. 5				64	83	89		2	
10				76	91	93		5	
15				85	96	96	4	11	24
20				92	99	98	5	18	34
25				94	100	99	9	28	47
30							17	39	59
Sept 5							28	57	71
10							46	77	81
15							66	92	90
20							74	100	94
25							82		96
Oct. 5							88		98
10							92		
15							98		

CORN: Development by selected dates, Ohio, 1989, 1988 and 1984-88 average

Date	Mature			Harvested for grain			Harvested for silage		
	1989	1988	Average	1989	1988	Average	1989	1988	Average
	Percent			Percent			Percent		
Aug. 15								5	
20								6	
25								7	
30		1					2	10	14
Sep. 5		9					3	15	21
10	2	18	27				5	20	28
15	4	22	36				8	27	37
20	8	32	48		1		11	41	45
25	13	42	60		2		16	53	55
30	18	50	68		3		22	63	63
Oct. 5	28	62	76	1	5	15	34	72	71
10	42	73	82	4	9	20	46	80	78
15	60	83	88	6	14	27	58	86	84
20	80			10	22	35	70	92	89
25				18	31	44			93
30				28	42	54			
Nov. 5				45	56	62			
10				50	67	71			
15				62	75	78			
20				82	82	82			

SOYBEANS: Crop development by selected dates, Ohio, 1989, 1988 and 1984-88 average

Date	Planted			Setting Pods		
	1989	1988	Average	1989	1988	Average
	Percent			Percent		
May 5		18	7			
10	2	36	21			
15	2	56	40			
20	3	73	51			
25	6	82	60			
30	11	90	67			
Jun. 5	17	94	74			
10	26	95	79			
15	36	99	84			
20	45	100	88			
25	56		90			
30	82		96			
Jul. 5	97		99			
10						
15					1	
20					6	
25				3	12	19
30				5	25	34
Aug. 5				19	57	58
10				28	78	73
15				40	88	83
20				52	89	88
25				64	91	91
30				80	96	95

SOYBEANS: Crop development by selected dates, Ohio, 1989, 1988 and 1984-88

Date	Mature			Harvested		
	1989	1988	Average	1989	1988	Average
	Percent			Percent		
Sep. 5						
10						
15						
20		15				
25	4	27	39		6	
30	12	44	55		12	
Oct. 5	23	61	68	6	21	25
10	39	78	79	12	36	38
15	59		89	19	52	49
20	80			36	64	61
25				52	72	71
30				68	77	81
Nov. 5				90	84	86
10				92	88	90
15				94	93	93
20				97	96	96
25						
30						

WINTER WHEAT: Percent planted on selected dates, Ohio, 1989, 1988 and 1984-88 average

Date	Planted*		
	1989	1988	Average
	Percent		
Sep. 15	3		
20	6		4
25	9	10	8
30	12	22	16
Oct 5	22	35	29
10	34	52	43
15	45	70	56
20	62	81	69
25	74	87	79
30	83	92	87
Nov. 5	92	95	93
10	95	97	96
15		99	97

*Planted for following year's harvest.

WINTER WHEAT: Crop development by selected dates, Ohio, 1989, 1988 and 1984-88 average

Date	Headed			Harvested		
	1989	1988	Average	1989	1988	Average
	Percent			Percent		
May 15						
20		18				
25	6	47	48			
30	21	77	70			
Jun. 5	51	92	85			
10	89	94	95			
15	94	98	98			
20	98	100	100			
25					5	
30					24	
Jul. 5				1	53	25
10				6	78	47
15				36	94	70
20				68	97	86
25				89	100	95
30				94		98
Aug 5				98		

OATS: Crop development by selected dates, Ohio, 1989, 1988 and 1984-88 average

Date	Planted			Headed			Harvested		
	1989	1988	Average	1989	1988	Average	1989	1988	Average
	Percent			Percent			Percent		
Apr. 5									
10		15							
15		32							
20		53							
25	40	74	70						
30	60	87	82						
May 5	72	93	89						
10	78	97	93						
15	81	100	96						
20	84		97						
Jun. 5				2	14	20			
10				6	26	35			
15				14	46	53			
20				26	67	66			
25				48	82	77			
30				53	88	84			
Jul. 5				68	96	92			
10				90				7	
15								17	
20								32	
25							10	49	43
30							22	67	61
Aug. 5							41	86	76
10							65	92	87
15							83		93
20							91		97

OTHER HAY: PERCENT HARVESTED ON SELECTED DATES, OHIO, 1989, 1988 AND 1984-88 AVERAGE

Date	First cutting			Second cutting			Third Cutting		
	1989	1988	Average	1989	1988	Average	1989	1988	Average
	Percent			Percent			Percent		
May 25		12							
30	5	30	21						
Jun 5	12	57	36						
10	20	71	48						
15	23	81	57						
20	27	87	64						
25	33	93	72						
30	50	95	80						
Jul 5	64	98	87		11				
10	75	100	91	4	22	16			
15	83			8	35	26			
20				14	40	35			
25				22	44	44			
30				30	49	54			
Aug 5				44	58	64		4	
10				54	62	70		6	
15				60	66	74	5	9	13
20				66	68	79	8	13	18
25				67	72	82	8	22	25
30					78		11	26	31
Sept 5							15	35	38
10							16	44	47
15							21	51	54
20							30	63	62
25							44	75	70
30								82	

ALFALFA HAY: PERCENT HARVESTED ON SELECTED DATES, OHIO, 1989, 1988 AND 1984-88 AVERAGE

	First cutting			Second cutting			Third Cutting		
	1989	1988	Average	1989	1988	Average	1989	1988	Average
	Percent			Percent			Percent		
May 20		10							
25		25							
30	8	50	37						
Jun 5	20	78	55						
10	33	89	67						
15	38	95	75						
20	42	97	80						
25	48	99	85		11				
30	62	100	90		23				
Jul 5	76		94		37				
10	87		97	10	51	36			
15				19	66	48			
20				32	71	60			
25				42	78	70			
30				51	85	78			
Aug 5				64	89	85		15	
10				73	92	89	7	26	24
15				80	95	93	9	35	33
20				86	98		13	45	41
25				89			18	59	50
30							29	68	61
Sept 5							41	78	71
10							49	86	78
15							55	91	82
20							63	94	87
25							73	97	92
30							81		95

DAYS FAVORABLE FOR FIELD WORK: OHIO, 1989, 1988 AND 1984-88 AVERAGE

Date	1989		1988		Average	
	7-day	Cumulative	7-day	Cumulative	7-day	Cumulative
	Number of days					
Apr. 8			1.2	1.2		
15			5.2	6.4	3.3	3.3
22	3.1	3.1	5.6	12.0	3.7	7.0
29	2.9	6.0	5.4	17.4	4.6	11.6
May 6	2.0	8.0	6.0	23.4	4.7	16.3
13	.6	8.6	6.0	29.4	5.6	21.9
20	2.1	10.7	5.7	35.1	4.0	25.9
27	1.8	12.5	5.7	40.8	3.8	29.7
Jun. 3	3.8	16.3	6.3	47.1	4.6	34.3
10	3.2	19.5	6.8	53.9	5.4	39.7
17	1.2	20.7	6.6	60.5	4.6	44.3
24	3.0	23.7	6.9	67.4	5.5	49.8
Jul. 1	5.1	28.8	6.9	74.3	5.5	55.3
8	5.5	34.3	7.0	81.3	4.7	60.0
15	5.8	40.1	6.9	88.2	5.3	65.3
22	4.7	44.8	4.2	92.4	5.9	71.2
29	4.3	49.1	5.7	98.1	6.0	77.2
Aug. 5	5.4	54.5	6.3	104.4	5.9	83.1
12	6.4	60.9	6.2	110.6	5.5	88.6
19	6.2	67.1	6.1	116.7	6.2	94.8
26	4.2	71.3	5.5	122.2	5.6	100.4
Sep. 2	4.6	75.9	5.5	127.7	5.2	105.6
9	5.7	81.6	4.6	132.3	5.7	111.3
16	3.4	85.0	5.2	137.5	5.7	117.0
23	5.2	90.2	5.1	142.6	5.2	122.2
30	6.4	96.6	6.5	149.1	4.9	127.1
Oct. 7	5.9	102.5	6.2	155.3	4.4	131.5
14	4.6	107.1	6.4	161.7	5.3	136.8
21	2.5	109.6	4.0	165.7	4.7	141.5
28	6.4	116.0	4.5	170.2	4.9	146.4
Nov. 4	5.5	121.5	5.7	175.9	4.5	150.9
11	3.6	125.1	2.6	178.5	2.6	153.5
18	3.4	128.5	4.6	183.1	3.0	156.5

CONSUMPTION OF COMMERCIAL FERTILIZERS, OHIO, 1986 TO 1989

Specified mixtures and materials	Year ending June 30			
	1986	1987	1988	1989
	Tons			
Mixed fertilizers, all	617,302	560,356	546,122	507,112
18-46-0	156,772	135,238	135,061	139,340
6-24-24	64,757	44,476	36,315	26,439
19-19-19	17,389	18,554	18,054	16,717
Anhydrous ammonia	158,054	149,620	125,354	103,570
Urea	148,660	123,243	100,743	100,278
Ammonium nitrate	9,802	7,265	6,636	3,317
Ammonium sulfate	17,968	16,477	20,261	25,206
Nitrogen solutions	467,088	422,553	409,855	393,532
Superphosphates	68,382	46,417	40,644	42,978
Potassium chloride	439,415	389,527	419,933	352,677
Total all fertilizers 2/	1,951,387	1,768,260	1,697,398	1,562,984
Primary Plant Nutrients				
N	404,812	373,352	332,644	306,482
Available P205	205,917	178,719	175,123	171,283
K20	346,396	308,329	324,687	276,137
Total Nutrients	957,124	860,400	832,454	753,902

1/ From Commercial Fertilizers published by Tennessee Valley Authority , Economics and Marketing Staff, National Fertilizer Developement Center. 2/Not sum of above specified mixtures and materials.

FERTILIZER AND PESTICIDE USE, ON CORN, WHEAT AND SOYBEAN ACREAGE OHIO, 1989 1/

Crop	Acres receiving				Rate per acre receiving		
	Any Fertilizer	N	P_2O_5	K_2O	N	P_2O_5	K_2O
	Percent				Pounds		
Corn	100	99	97	92	143	72	101
Soybeans	51	21	37	50	14	55	93
Wheat	95	95	92	90	79	60	67

1/Based on 1989 Objective Yield Surveys. Published in Agricultural Resources Inputs, February 1990.

AVERAGE PRICES PAID BY FARMERS PER TON FOR SELECTED COMMERCIAL FERTILIZERS IN NORTH CENTRAL STATES 1/

Selected fertilizer	April 15, 1988	October 15, 1988	April 15, 1989	October 15, 1989
	Dollars per ton			
5-20-20	171	167	171	163
6-24-24	207	208	217	195
8-32-16	223	220	230	208
10-34-0	234	232	239	223
12-12-12	166	162	172	158
15-15-15	178	186	192	170
18-46-0	253	247	258	217
Ammonium nitrate	155	160	179	160
Urea 44-46%	184	185	213	165
Anhydrous ammonia	205	190	223	177
Nitrogen solution 28%	127	121	140	117
Super phosphate 44-46%	220	217	226	195
Muriate of potash 60%	156	156	162	152

1/Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin.

FERTILIZER NUTRIENT AND PRODUCT TON, DELIVERIES BY COUNTY, JULY 1988-JUNE 1989

COUNTY	N tons	P tons	K tons	Prod. tons	COUNTY	N tons	P tons	K tons	Prod. tons
ADAMS	10,208	5,934	6,928	44,186	LICKING	1,359	684	984	7,392
ALLEN	4,701	2,307	3,866	22,266	LOGAN	3,111	2,425	3,265	19,335
ASHLAND	3,485	2,082	3,849	17,167	LORAIN	1,508	1,141	1,603	8,258
ASHTABULA	2,943	2,171	3,379	15,523	LUCAS	2,120	703	1,774	9,334
ATHENS	384	387	471	2,187	MADISON	4,798	3,008	5,357	26,891
AUGLAIZE	6,658	5,037	8,803	42,477	MAHONING	2,458	1,643	2,087	12,687
BELMONT	355	360	604	2,466	MARION	5,974	3,673	6,546	33,528
BROWN	917	594	1,020	5,122	MEDINA	782	485	694	4,212
BUTLER	3,652	1,425	2,350	17,877	MEIGS	49	58	111	399
CARROLL	239	160	185	1,262	MERCER	9,484	5,171	7,993	49,440
CHAMPAIGN	15,008	5,150	8,211	54,369	MIAMI	5,502	3,146	4,850	28,352
CLARK	6,687	2,775	4,459	27,366	MONROE	95	70	78	521
CLERMONT	292	102	98	1,592	MONTGOMERY	2,069	1,144	1,938	10,432
CLINTON	7,500	3,533	5,841	35,281	MORGAN	10	4	4	34
COLUMBIANA	2,283	2,380	1,965	12,208	MORROW	3,463	1,828	2,952	16,919
COSHOCTON	1,191	469	835	4,493	MUSKINGUM	1,059	456	1,639	6,392
CRAWFORD	7,567	3,985	7,494	37,229	NOBLE	43	33	35	233
CUYAHOGA	367	228	271	2,210	OTTAWA	2,387	1,714	3,545	16,524
DARKE	10,103	4,746	7,652	45,608	PAULDING	2,818	1,509	1,906	12,759
DEFIANCE	2,976	1,978	2,300	14,817	PERRY	517	241	409	2,256
DELAWARE	2,537	1,962	2,610	15,712	PICKAWAY	9,749	4,613	8,222	51,122
ERIE	1,383	791	1,510	7,113	PIKE	475	296	412	2,371
FAIRFIELD	3,064	1,315	2,519	14,654	PORTAGE	823	546	1,263	5,171
FAYETTE	6,354	3,208	6,085	33,606	PREBLE	9,155	4,231	7,515	43,577
FRANKLIN	1,087	473	640	5,088	PUTNAM	8,759	5,583	7,419	44,091
FULTON	7,393	3,286	7,230	36,017	RICHLAND	5,220	2,957	5,148	25,836
GALLIA	90	97	111	719	ROSS	1,836	805	1,076	8,735
GEAUGA	572	460	942	3,878	SANDUSKY	7,682	5,473	10,023	48,701
GREENE	4,478	2,099	3,705	19,679	SCIOTO	144	85	98	695
GUERNSEY	303	203	336	1,574	SENECA	7,743	4,836	10,086	45,882
HAMILTON	236	176	288	1,651	SHELBY	4,073	2,199	4,083	23,753
HANCOCK	9,094	7,704	9,631	52,233	STARK	2,169	1,363	2,190	12,652
HARDIN	6,630	2,848	4,536	27,287	SUMMIT	143	86	123	854
HARRISON	148	117	147	902	TRUMBULL	774	988	1,074	5,255
HENRY	8,921	5,620	7,961	44,847	TUSCARAWAS	2,137	1,302	1,887	10,729
HIGHLAND	4,210	2,854	4,622	24,433	UNION	4,650	2,912	4,665	25,511
HOCKING	133	103	131	765	VAN WERT	5,236	3,216	4,330	25,794
HOLMES	517	275	363	2,346	VINTON	2	5	4	23
HURON	8,224	3,788	5,885	36,128	WARREN	2,853	1,025	1,916	11,180
JACKSON	1,250	927	1,424	6,899	WASHINGTON	2,132	1,388	1,873	9,881
JEFFERSON	339	318	378	2,135	WAYNE	3,860	3,120	4,014	22,759
KNOX	2,494	1,502	2,031	13,368	WILLIAMS	7,893	3,670	7,321	37,000
LAKE	130	69	85	694	WOOD	7,606	3,774	5,635	36,665
LAWRENCE	90	42	27	356	WYANDOT	4,586	1,646	4,218	20,795

COMMERCIAL FLORICULTURE PRODUCTION AND VALUE, OHIO, 1988 AND 1989

CROP	UNIT	QUANTITY SOLD TOTAL (1000 UNITS)		PERCENT OF SALES SOLD WHOLESALE		WHOLESALE PRICE (DOLLARS)		WHOLESALE VALUE OF TOTAL SALES (1000 DOLLARS)	
	UNIT	1988	1989	1988	1989	1988	1989	1988	1989
CUT FLOWERS									
CARNATIONS									
STANDARD 1/	BLOOMS	-	-	-	-	-	-	-	-
MINIATURE 1/	BUNCHES	-	-	-	-	-	-	-	-
ROSES									
HYBRID TEA	BLOOMS	11,863	12,095	99	99	.503	.502	5,967	6,072
SWEETHEART	BUNCHES	2,740	2,360	100	100	.324	.325	888	767
CHRYSANTHEMUMS									
STANDARD	BLOOMS	605	573	73	41	.735	.672	445	385
POMPON	BUNCHES	366	200	62	49	2.57	2.60	941	520
GLADIOLI 1/	SPIKES	-	-	-	-	-	-	-	-
OTHER CUT FLOWERS 1/		-	-	-	-	-	-	-	-
POTTED PLANTS									
AFRICAN VIOLETS	POTS	4,980	5,020	98	99	1.01	1.10	5,037	5,525
CHRYSANTHEMUMS	POTS	1,993	1,042	97	95	2.19	3.30	4,366	3,348
AZALEAS	POTS	347	1,266	96	99	4.71	3.93	1,633	4,978
LILLIES									
EASTER	POTS	646	687	91	91	3.48	3.49	2,247	2,398
OTHER	POTS	33	49	85	82	3.24	3.61	107	177
POINSETTIAS	POTS	3,259	3,489	86	85	2.39	2.51	10,739	12,283
OTHER FLOWERING	POTS	1,052	2,116	84	93	2.20	2.26	2,319	4,787
POTTED FOLIAGE 2/	POTS			89	91			6,207	4,371
HANGING BASKETS									
FLOWERING	BASKETS	1,372	1,487	72	78	5.22	5.85	7,162	8,699
FOLIAGE	BASKETS	1,510	1,467	97	96	3.87	3.87	5,844	5,677
BEDDING/FLATS									
GERANIUMS	FLATS	322	390	78	84	8.20	8.61	2,640	3,358
FLOWERING/FOLIAGE	FLATS	5,225	5,652	76	80	5.51	5.35	28,790	30,238
VEGETABLE	FLATS	901	797	61	70	5.18	5.22	4,667	4,160
BEDDING PLANTS									
HARDY MUMS	POTS	2,040	2,254	35	41	1.56	1.69	3,184	3,817
GERANIUMS									
CUTTINGS	POTS	5,352	5,480	70	68	1.08	1.23	5,784	6,756
SEEDED	POTS	3,710	3,483	72	78	.95	.88	3,519	3,058
OTHER POTTED	POTS	3,677	3,217	78	77	1.23	1.20	4,512	3,863
VEGETABLE POTS	POTS	531	555	43	53	1.10	.84	584	468

1/ Data not published to avoid disclosure of indiviual operations. 2/ Value of total sales equals net value of sales.

POTTED PLANTS SOLD BY SIZE OF POT, OHIO, 1988 AND 1989

	1988			1989		
	>5 in.	<5 in.	TOTAL	>5 in.	<5 in.	TOTAL
	Thousand pots					
AFRICAN VIOLETS	4,977	3	4,980	5,019	1	5,020
CHRYSANTHEMUMS	937	1,056	1,993	238	804	1,042
AZALEAS	42	305	347	731	535	1,266
EASTER LILLIES	3	643	646	-	687	687
OTHER LILLIES	9	24	33	10	39	49
POINSETTIAS	645	2,614	3,259	770	2,719	3,489
OTHER FLOWERING	564	488	1,052	1,264	852	2,116

NURSERY SURVEY SUMMARY

A questionnaire sent to dealers and producers of nursery stock along with their annual license renewal form was the source of these charts and data. Information was obtained concerning sales, employment and taxes. Only selected highlights of the preliminary results are presented here. The estimated nursery industry wholesale and retail sales in Ohio during 1988 totaled $1.25 billion. The price chart (Figure 1) shows the percent of the dollar volume generated from each listed activity. The chart shows wholesale sales generated 27 percent of the dollar volume. Landscape construction and maintenance earned 39 percent of the gross sales. Retail garden centers took in 28 percent of the money. This left 6 percent for mail order and other sources.

The Ohio nursery industry employed 27,900 full time employees, 16,200 year-round part time employees, and 35,500 seasonal employees during 1988. The nursery industry relies very much on seasonal employees. This is the largest group of employees in every type of nursery operation except "others." Full-time employees are next in number supplemented by part-time year-round workers. Figure 2 shows the distribution of employees by the type of operation and by type of worker, i.e. full-time, part-time and seasonal.

Nursery Industry Sales by Dealers and Producers, Ohio -- 1988

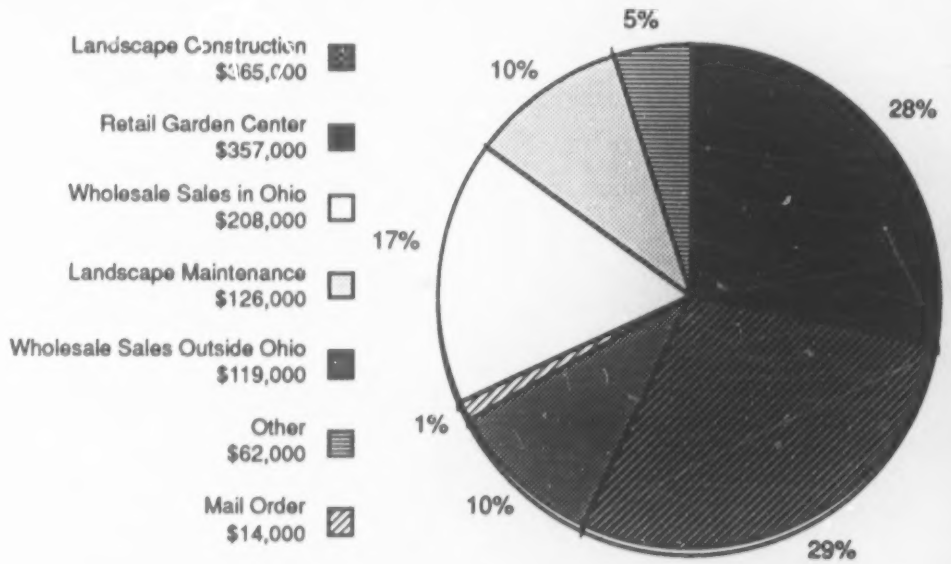
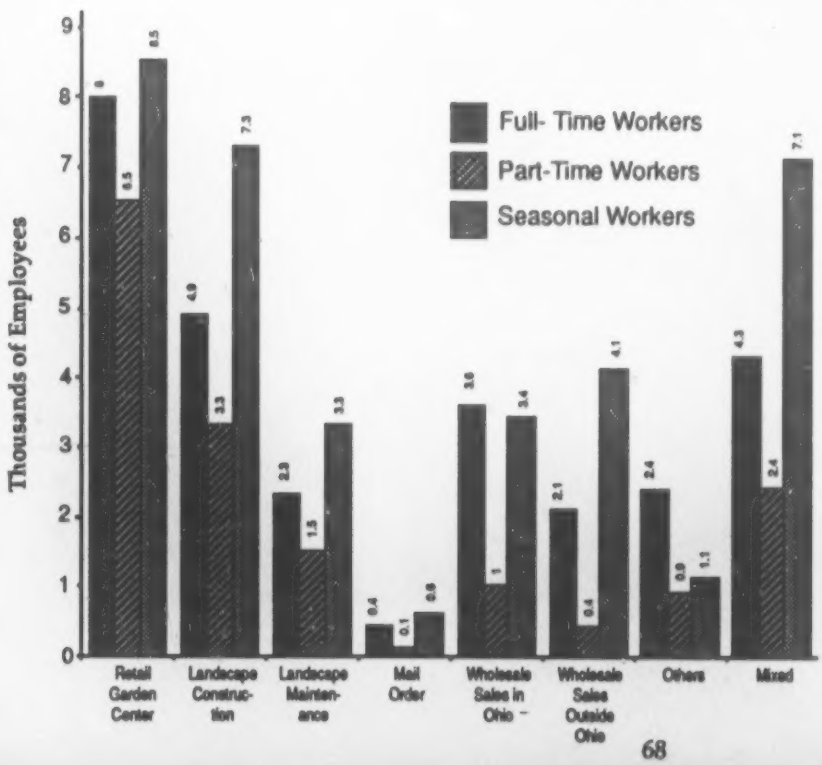


Figure 1



Number of Employees by Type of Operation, Nursery Industry, Ohio -- 1988

Figure 2

THE OHIO DEPARTMENT OF AGRICULTURE

1989 ANNUAL REPORT

Richard F. Celeste, Governor
Steven D. Maurer, Director

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THE OHIO DEPARTMENT OF AGRICULTURE IS AN EQUAL OPPORTUNITY EMPLOYER

Division of Administration

The Division of Administration is responsible for providing services to enhance the smooth operations of the other divisions of the Department of Agriculture, as well as coordinating and supervising all activities of ODA.

Contained within Administration are the Human Resources Section-responsible for Labor Relations, Equal Employment Oportunity and Personnel, the Fiscal Office-responsible for all of ODA's financial matters, and the Computer Section-responsible for all of ODA's computer systems.

The Assistant Director of ODA serves as legal counsel to the Department. The following are changes which were made during 1989 that affect the rules and laws governed by ODA:

LEGISLATIVE CHANGES

Ohio Omnibus Agricultural Act H.B. 571
(Effective July 27, 1990)

• Pesticide Law (Section 921 R.C.)
Requires three year record keeping for "restricted use" pesticides; authorizes the Director to deny a pesticide license to individuals convicted of felonies or certain misdemeanors; allows the Director to levy civil fines after Administrative Hearing for Pesticide Law violations.

• Animal Health (Section 941 R.C.)
Provides authorization to pay indemnification for swine pseudorabies under rules adopted by the Director; exempts persons who are "contract feeding" livestock from the current neccessity for a livestock dealer's license; provides authority to accept a letter of credit in lieu of a bond as proof of financial responsibility for livestock dealers.

• Commodity Marketing Programs (Section 924 R.C.)
Modifies the procedure for conduct of a producer referendum to eliminate necessity for Director's hearing and appointment of temporary operating committee; requires that programs proposed for a referendum vote must include the proposed rate of assessment for commodity, procedure for refunds, and committee election procedures if applicable.

• Weights & Measures (Section 1327 R.C.).
Expands civil penalties from present maximum of $4,000 to $10,000 per violation; extends weights and measures enforcement jurisdiction to "services".

• Cannery Law (Section 913 R.C.).
Extends Cannery licensing requirements to certain "speciality products" including puddings, gravies, sauces, and fish; requires all canneries to comply with regulations adopted by U.S. Food and Drug Administration regarding acidity, temperature control, sterilization, etc..

• Feed Law (Section 923 R.C.).
Defines "adulterated" feed and establishes procedures for removing adulterated feeds from the market and prosecuting violators. Requires feeds containing any type of medication to bear a label which is the direction for safe and effective use of the drug contained in the feed.

• Agricultural Producer's Lien (H.B. 33)
This measure amends Section 317.08 and enacts Sections 1311.55, 1311.56, 1311.57 of the Revised Code to create an agricultural product lien on the value of agricultural products delivered to an agricultural products handler. The measure requires a qualified producer to file an affidavit with the county recorder in the county wherein the agricultural product's handler conducts business within 60 days of the date of delivery of the agricultural products. An agricultural producer who perfects his lien within 60 days after the date of delivery has priority over secured creditors who have security interest under Chapter

1309 of the Revised Code and has priority over all other liens with the exception of salary claims, warehouse liens, and amounts owed by the leinholderer to the handler that are subject to setoff. The measure becomes effective October 26, 1990.

SUMMARY OF 1989 RULE CHANGES

In response to a growing interest on the part of both producers and consumers, the Department's Division of Foods, Dairies & Drugs adopted four new rules which establish a standard of identity for organically grown foods. Foods and feed certified by a certifying agency

designated by the Department, to have been raised and processed in accordance with the practices prescribed in the rules, may be labeled, advertised and marketed as "organic."

• Working principally with both Ohio Pesticide Applicators for Responsible Regulation and the Sierra Club, the Department's Pesticide Regulation Section adopted a new rule requiring licensed pesticide applicators to post a sign on lawns to which they have applied pesticides and fertilizers warning people to stay off the area. Under this rule, licensed applicators must also notify abutting property owners who request prior notification.

• The Department's Division of Weights & Measures established a voluntary program for the registration of agencies and personnel who service and repair weighing and measuring devices. This rule will enable the Department to insure greater accuracy in these devices by establishing standards for, and certifying registrants who have the requisite knowledge and equipment to test and repair measuring devices. The Division also adopted three new rules governing the manner in which price and quantity are markedon certain food and non-food products. These rules will aid consumers in determining the quantity of their purchase and the price per unit.

• During the past year, the Grain Warehouse Section adopted four new rules, amended three existing rules and rescinded one rule. One of their four new rules exempts from licensure as a commodity handler anyone who purchases less than ten thousand bushels of grain annually. This rule also exempts sellers from protection under the indemnity fund and requires buyers to notify the seller of this exemption. The three other new rules adopted by the Section establish a formal curriculum for training and certifying commodity testers and add seven new agricultural commodities to those already protected by the indemnity fund.

• Of the three existing rules which were amended, two were changed to require licensees to report the number of bushels handled at each separate facility they operated, and furnish an annual report on that facility as part of their yearly financial statement. This will enable the Section to audit the indemnity fund against actual bushels of grain handled by a licensee. The third rule amended by the Section expanded the list of marketing services approved for offer by licensed handlers. Rescinded was the requirement that grain settlement checks contain an endorsement by the seller stating the grain sold was unencumbered. This change was necessitated when statutory authority for this rule was rescinded.

• The Department's rule designating dangerously contagious and infectious diseases was amended by the Division of Animal Industry. The amendment limits the designation of blue tongue to sheep and goats and replaces infectious laryngotracheitis with lethal avian influenza. The amendment also limits the disease of brucellosis to diseases caused by the three genera abortus, melitensis, and suis of the species brucella, and limited tuberculosis to myobacterium bovis.

These changes reflect the fact that new biologics have eliminated infectious laryngotracheitis as a problem while lethal avian influenza is a potential threat. Experience has shown bovine blue tongue is not a significant disease threat. Tuberculosis and brucellosis have both been restricted to those types that affect livestock.

AGRICULTURAL FINANCING COMMISSION

The Ohio Agricultural Financing Commission (OAFC) was created and authorized by the 115th General Assembly (H.B. 826) and officially began its operation on January 11, 1985. The Commission consists of nine members: Director Steven D. Maurer, Ohio Department of Agriculture; Director David Baker, Ohio Department of Development; Mary Ellen Withrow, Treasurer, State of Ohio; Dick Tootle, Member; Judith Hall, C.P.A., Glenn Lackey, Member; James Lewis, Vice Chairman; Francis Less, Member; and Joseph Luby, Member.

When implemented the Commission's primary function was to issue tax-exempt revenue bonds to private lending institutions, thereby generating money which Ohio's farmers could borrow at low interest rates. Farmers could then use the money to acquire and improve agricultural land and equipment. In 1986, due to changes in the federal tax laws, the feasibility and effectiveness of issuing tax-exempt agricultural revenue bonds was greatly reduced. Accordingly, the Commission's activities significantly reduced during the last half of 1988 becasue of the inability of lending institutions to capture the benefits of tax-exempt status on their cost of funds.

The activity of the OAFC increased slightly during 1989. Three tax-exempt bonds were issued for $475,000. The number of requests increased during 1989; however, the lack of participation by lending institutions and restrictions of the program limited the Commission's activities. The tax-exempt bond program in agriculture has a sunset date of September 31, 1990. Unless the sunset is extended or completely lifted, the tax-exempt bond program will terminate at the end of the federal fiscal year.

HUMAN RESOURCES SECTION

The Human Resources Section provides administrative support to all employees within the Department. Areas of responsibility are as follows:

Labor Relations: The Human Resources Administrator also serves as Labor Relations Coordinator, providing management with information and technical knowledge regarding the AFSCME/OCSEA Contract. In addition, the Administrator serves as ODA's liaison to the State Office of Collective Bargaining.

STATEMENT OF EXPENDITURES
FISCAL YEAR 1989

SPECIAL PURPOSE
GENERAL REVENUE FUND

503	Swine and Cattle Breeder Awards	$8,202.00
401	Aujeskys Disease	120,818.88
405	Rodent Control	38,245.54
499	Meat Inspection (State Match)	3,179,762.83
501	County Agricultural Societies	207,999.65
413	Gypsy Moth Prevention	73,758.97
415	Poultry Disease Prevention	93,162.29
	TOTAL SPECIAL PURPOSE ITEMS	$3,721,950.16
	GRAND TOTAL EXPENDITURES ALL FUNDS	**$25,412,767.80**

GENERAL OPERATING
GENERAL REVENUE FUND

701	Administration	$3,302,675.10
702	Animal Industry	1,766,883.54
703	Foods, Dairies and Drugs	1,239,700.39
704	Marketing & Communications	178,151.79
705	Plant Industry	2,005,337.52
706	Weights and Measures	585,589.24
708	Fairs & Amusement Ride Safety	464,014.21
709	Grain Warehouse	179,771.92
	TOTAL DIVISIONAL GRF OPERATING EXPENDITURES	$9,722,123.71*

*includes salary, fringe benefits, maintenance & equipment

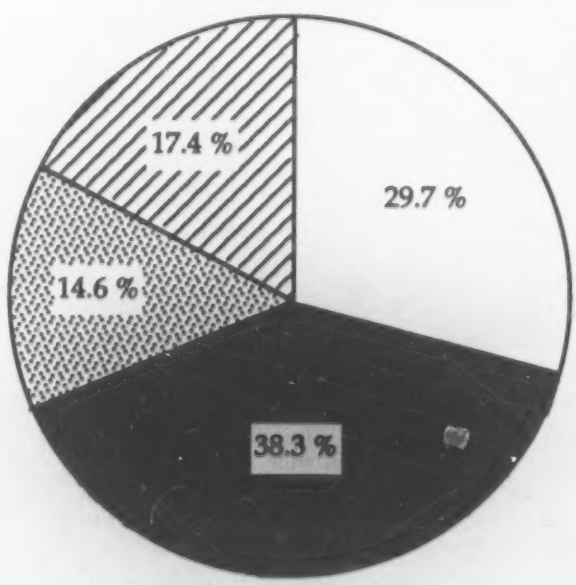
SPECIAL ACCOUNTS & STATE SPECIAL REVENUE ACCOUNTS *$7,536,898.93*
29.7 % Total Expenditures

490	$62,059.23	497	$338,570.46
492	36,474.70	498	206,879.30
493	61,378.57	575	2,285.00
494	305,028.02	578	145,537.95
495	119,500.84	579	44,495.74
496	6,555.00	588	50.00
083	3,080,040.78	652	36,688.21

FEDERAL MONIES SPECIAL REVENUE ACCOUNTS *$4,431,795.00* *
17.4 % Total Expenditures

617	$183,620.40
601	692,677.04
618	3,555,497.56

GENERAL OPERATING REVENUE ACCOUNTS *$9,722,123.71*
38.3 % Total Expenditures



SPECIAL PURPOSE GENERAL REVENUE ACCOUNTS *$3,721,950.16*
14.6 % Total Expenditures

Equal Employment Opportunity: The EEO Officer ensures that all individuals are hired in accordance to all State and Federal EEO mandates. The EEO Officer also provides support to employees and investigates any EEO complaints to ensure compliance.

Personnel: The Personnel Office is responsible for the processing of Personnel transactions within ODA, as well as new employee orientation and position announcements.

Benefit Administration: All ODA Workers Comp and Disability claims are processed in Human Resources.

EMPLOYEES BY DIVISION
(As of April 9, 1990)

Administration	51
Marketing & Communications	12
Animal Industry	61
Foods, Dairies, & Drugs/Grading Serv.	82
Plant Industry	70
Weights & Measures	17
Consumer Analytical Lab	24
Meat Inspection	183
Amusement Ride Safety	16
TOTAL EMPLOYEES	**506**

OFFICE OF FAIRS

It is the responsibility of this Office to assist and regulate the 94 County and Independent Fairs in Ohio. Volunteers in the County Agricultural Societies depend on ODA for official interpretation of Ohio law concerning fairs.

A new audit program, put into effect on December 1, 1988, calls for the auditing of Ohio's fairs every two years. In addition, all fairs are now under the same accounting system.

The Office audits all fairs' Annual Reports and releases county financial aid certificates and checks from the Ohio Fairs Fund for the coming year. This fund was at an all time high this year of almost three million dollars.

The Administrative Coordinator of this section also represents the Director, when necessary, at Ohio's 87 County Fairs and 7 Independent Fairs.

DIVISION OF ANIMAL INDUSTRY

The division has continued to expand its service to the livestock industry of Ohio. Teresa Newell, DVM, Ph.D, has been appointed Laboratory Director and is expanding Biological and Pathological services. The new building continues to be very functional and with the help of new employees, a positive future is at hand.

Tuberculosis - Ohio has had no confirmed bovine tuberculosis since August of 1985. In order to be declared TB free by USDA, APHIS, and VS, a state must not have any infection for 5 years. If no TB cases are found, Ohio can apply for TB free status in August, 1990. Tuberculosis surveillance is continuing through inspection of Ohio slaughter cattle and the TB testing 38,583 animals on the farm.

Equine Infectious Anemia - Ohio continues an active, productive EIA Program. During 1989, 5 positive horses were found and removed as a source of infection to other horses in the equine industry

Brucellosis - No confirmed cattle brucella infection has been found in the state since April of 1986. Ohio was brucellosis certified free (cattle) on June 11, 1987, and brucellosis validated free (swine) on December 29, 1986. This free status allows Ohio swine and cattle to move more freely in interstate commerce. Ohio continues to survey animals sold and slaughtered for brucellosis.

Pseudorabies: - With a swine population of 2.08 million, Ohio is the first major swine producing state to gain Stage III PRV status. Other states with PRV III status are Alabama, Arkansas, West Virginia, andWisconsin. Wisconsin, the second largest swine state to receive Stage III status, has 1.25 million head of swine. This should allow Ohio's feeder swine to move more freely in interstate commerce. During 1989, 81 newly infected herds were found while 68 herds were released from quarantine. On December 31, 1989, Ohio had 145 PRV quarantined herds.

Ninety percent of PRV vaccine sold in the state is gene deleted. This allows the use of a companion test to differentiate immunity caused by field strain virus from vaccine strain virus. During 1989, Ohio tested 4,132 swine serum samples using this new technology.

LICENSING AND INSPECTION

This section administers rules and regulations relating the operation of several sectors of Ohio's Animal Industry. Licenses are issued annually to various livestock industry operations including dealers, auction markets, concentration yards, and weighers. Licenses are also issued to rendering collectors, rendering plants and garbage feeders. 1,009 licenses were issued by this section in calendar year 1989.

The license and inspection section helps protect the livestock farmer when selling his livestock by ensuring accurate weights. Weighers must be licensed and scales tested every six months. We require and monitor the record keeping system of dealers and markets so that epidemiological tracing can be accomplished in the event of disease outbreaks.

Swine garbage feeders are inspected monthly. At these inspections, the cooking temperature of the feed (garbage) is checked, the general sanitation of the premises is inspected and the health of the animals is evaluated. This program helps prevent the spread of exotic and domestic diseases.

The Licensing and Inspection Section monitors compliance with the states' Administrative Rules designed to prevent and control the spread of dangerously contagious and infectious diseases.

LABORATORY SERVICES UNIT

Advancement of animal health programs is integral to protection of human health and promotion of the agricultural economy of the State of Ohio. The Division of Animal Industry's Laboratory Services Unit is committed to providing high-level laboratory support for state-federal animal disease eradication and control programs, and to continued expansion and improvement of diagnostic services provided to Ohio's animal and poultry industries.

The Laboratory Services Unit provides core support in pathology, serologic, bacteriologic, and virologic testing in investigation of animal disease problems. Ancillary services include parasitology, clinical pathology, and toxicologic evaluations.

In on-going efforts to develop a broader range of laboratory services and to progress toward laboratory certification by the American Association of Veterinary Laboratory Diagnosticians, the Laboratory Services Unit is investigating new technologies and utilizing improved methodologies necessary to ensure more accurate and timely diagnosis and reporting of economically important diseases.

1990 Laboratory goals include: Addition of a histology laboratory and trained personnel central to expansion of histopathology support and full-range pathology services; outside training of personnel for development of expanded export and routine serologic testing capabilities; increased levels of participation and laboratory certification for mandatory National Poultry Improvement Plan Salmonella monitoring programs; expansion of routine and specialized microbiological culture techniques (to include doubling of Johne's culture capacity); and participation of laboratory personnel in regional and national meetings critical to program and test development and to continuing education needs.

The Laboratory Services Unit welcomes the opportunity to interact with and to serve the agricultural and veterinary communities. Cooperative exchange of information and comments is encouraged to assist our laboratory in achieving the above and future goals.

ANIMAL DISEASE PROGRAMS

January 1, 1989 - December 31, 1989

BRUCELLOSIS

Bovine	
Farm Blood Tests - Herds	4,928
Cattle	43,665
Milk Ring - Herds	8,849
Cattle	345,130
Over-all Infection Rate (cattle)	0%
Calves Vaccinated	64,882

Cattle Blood tests at Livestock Markets	27,600
Samples collected at slaughter	87,494
Porcine Slaughter Swine Tests - Ohio	30,224
Out of State	11,773

TUBERCULOSIS

Tuberculin Tests - Herds (Cattle)	3,210
Number of Cattle	38,583
Herds w/reactors	0
Number of reactors	0

EQUINE INFECTIOUS ANEMIA

EIA tests of Ohio horses	39,958
Number of Ohio horses "Positive"	5
Percent of total tested	.013%
Number of Positive horses destroyed	3

PSEUDORABIES

Swine tested	112,177
Infected herds found	81
Quarantined herds on 12-31-88	145

POULTRY

Pullorum/Typhoid Plate Test (Field)	8,294

LICENSING AND INSPECTION

January 1, 1989 - December 31, 1989

TYPE OF LICENSE ISSUED

Auction Markets	33
Horse Auctions	6
Concentration Yards	77
Slaughtering Establishments	96
Livestock Dealers	165
Weighers	564
Rendering Plants	8
Collectors of Raw Rendering Materials	56
Garbage Feeders	4

INSPECTIONS PERFORMED

Auction Markets	1,761
Concentration Yards	1,283
Rendering Plant and Raw Rendering Material Collectors	78
Garbage Feeders	42

PERMITS TO IMPORT FEEDER PIGS

Headage	153,453
Permits issued	1,370
Premises Inspected	945

LABORATORY SERVICES

January 1, 1989 - December 31, 1989

		% Pos.
Pathology Accessions	4,987	
Feed analysis	410	
Toxicological tests	214	
Rabies examinations	116	
Tissues examined histologically	3,793	
Johne's culture	1,818	10.4
Brucella culture	91	0.0
Salmonella (includes avian) culture	23,811	11.7
Brucellosis - Cattle	152,344	
- Swine	74,317	
- Other	3,655	
Brucellosis ring tests	32,562	
Equine Infectious Anemia	35,958	
Pseudorabies tests	112,177	
Bluetongue - AGID	5,427	1.3
Johne's CF	731	5.3
Anaplasmosis tests - Card	1,117	
- CF	2,303	
Bovine Leukosis tests	4,764	30.9
OPP/CAE - AGID	882	48.3
(Ovine Progressive Pneumonia/Caprine Arthritis Encephalitis		
IBR (Infectious Bovine Rhinotracheitis)	442	
PI3 tests (Parainfluenza 3)	144	
BVD tests (Bovine Virus diarrhea)	342	
BRSV (Bovine respiratory Syncytial- data available for October only)	15	
VS (Vesicular stomatitis)	132	1.4
Leptospirosis Test (6 serovars)	32,205	24.7
FA cases	1,054	
FA total tests	5,077	
Virus isolation cases		
- (egg inoculation)	19	10.5
- (tissue culture)	122	
Salmonella pullorum/gallisepticum (Plate test)	12,737	

Salmonella pullorum (Tube test)	5,143
Salmonella typhimurium (Tube test)	17,203
Salmonella enteritidis (Tube test)	693
Mycoplasma gallisepticum (Plate test)	41,449
Mycoplasma gallisepticum (HI test)	7,873
Mycoplasma synoviae (Plate test)	37,300
Mycoplasma synoviae (HI test)	2,487
Mycoplasma melegradis tests (Plate test)	46,252
Newcastle disease virus (HI test)	18,785
Avian Encephalomyelitis - ELISA	3,404
Infectious bronchitis - ELISA	10,038
Newcastle disease virus - ELISA	828
Infectious bursal disease - ELISA	3,404
Pasteurella Multocida - ELISA	1,196
Reo virus - ELISA	2,760
Mycoplasma gallisepticum- ELISA	92
Mycoplasma synoviae/gallisepticum ELISA	92
Micro Immuno Diffusion tests - Avian	
- Avian Influenza tests	4,964
- Hemorrhagic Enteritis tests	32,478
- Adenovirus	4,677
Samples Prepared and Shipped	1,085

Division of Amusement Ride Safety

Every year, hundreds of thousands of "children of all ages" delight in the rides and games at Ohio's amusement parks, county and independent fairs, and of course, the biggest one of them all – the Ohio State Fair. Everyone is caught in a whirl of excitement. Many people do not stop to think about safety while participating in such fun activities. However, safety IS extremely important. Without proper precautions, these favorite summer playgrounds can be dangerous to the unwary.

The responsibility for ensuring the safety of Ohio fair-goers falls to the Amusement Ride Safety Division of the Ohio Department of Agriculture. Created in 1985, the division inspects, licenses and maintains records on over 1,300 amusement rides at over 1,200 events and fixed facilities throughout the state. Current employees include: 11 inspectors, 2 supervisors, 1 chief inspector, 1 administrative assistant and 1 secretarial person.

RIDE LICENSING

All amusement operators must have a certificate of insurance on file with the Division of Amusement Ride Safety, stating that the company meets all insurance requirements set forth by state law. Each ride must have a permanent brass numbered I.D. plate provided by the Ohio Department of Agriculture. The I.D. plate affixed to the ride equipment serves as a permanent license number for that ride, making it easier for the Department to track the ride from owner to owner, and to follow maintenance and modification records. An inspector must verify each ride's I.D. plate before inspecting the ride.

There are three different types of inspections done by the Division of Amusement Ride Safety; the initial inspection supplemental inspection and re-inspection. In an initial inspection, all rides must meet the requirements established by both the Department of Agriculture and the manufacturers of the ride. The inspectors verify the safety of every amusement ride operated in the state. If any problem is found on the ride, and that problem cannot be corrected while the inspector is on site, the ride will not be licensed, nor will it receive a validation sticker which must be attached to all brass I.D. plates before the ride can operate. The ride will ONLY be allowed to run when all problems, big or small, are corrected.

The second and third types of inspection are the supplemental inspections and re-inspection. A re-inspection can occur throughout the year at either the ride company's request and/or the request of an event sponsor. When a periodic inspection is assigned by the Chief Ride Inspector, this inspection is known as a supplemental. If a problem is found with a ride during either a supplemental or re-inspection, every effort is made to work with the owner of the ride to make all corrections while the inspector is on site - so the ride will not have to be closed.

If the ride problem cannot be solved in a timely manner, and the ride is determined to cause a safety hazard to the riding public, the inspector will issue a "stop operation order", and tie a red tag to the controls of the ride. The ride cannot operate until the ride passes another inspection.

In every ride inspection, the following areas are covered: structural integrity, electrical safety, hydraulic systems, brakes, tubs and sweeps, the ride's operation, and proper warning signs and rules.

In addition, the State of Ohio requires that all ride owners keep accurate maintenance logs on a year round basis. The inspectors must verify the maintenance logs of each ride while on the inspection site, to ensure that the manufacturer's safety modifications and general upkeep of the ride are being carried out.

When any problems are found with the ride, the inspector issues a safety order which mandates that the repairs listed must be made by the stated date on the order. After making the repairs, the ride owner will send a signed copy of the inspection report to the Ohio Department of Agriculture which is kept on file under the ride company's name.

TRAINING

Amusement Ride Safety inspectors receive 80 hours of formal classroom training in the fall and winter of each year to upgrade their expertise in the ever-changing ride industry. New rides are constantly being developed by

manufactures, each one presenting new mechanics. Currently, there are over 700 rides in existence, built by more than 150 manufacturers. In order to do his job properly, each inspector must have a thorough understanding of electrical and hydraulic systems, preventative maintenance, lubrication and mechanical components.

In addition, our inspectors work to upgrade their amusement ride training manual which outlines inspection guidelines. These guidelines are based on manufacturer's recommendations and procedures that were developed by other regulatory authorities in cooperation with our own division.

Ride inspectors also make use of the winter months by making field visits to every ride company based in Ohio to discuss maintenance procedures and safety bulletins. In the name of safety, the Department strives to promote a good working relationship between the Division inspectors and the people who work in the amusement ride industry.

GAMES/NOVELTIES/SIDE SHOWS

The Ohio Department of Agriculture's Division of Amusement Ride Safety is also responsible for licensing and regulating all games, novelty stands and side shows at county and independent fairs, as well as the Ohio State Fair. Inspectors work to ensure that games are fairly operated, that novelty stands don't sell prohibited items and that side shows do not misrepresent their displays.

PROGRAMS

The Division sponsored the annual "Ride Safety Seminar," and a "Waterparks and Go-Cart Facilities" seminar. These seminars were attended by a total of 120 individuals who either own and/or operate rides in the State of Ohio. Both seminars covered the ride law and rules, guidelines to establishing an effective maintenance program and included a roundtable discussion on maintenance and safety training.

In conjunction with Columbus State Community College, Ohio hosted the 3rd Annual National Association of Amusement Ride Safety Officials (NAARSO) Safety Forum. This encompassed various aspects of ride safety including electrical inspections, accident investigations, foreign ride inspection, operator training and ride inspection standards. Inspectors also received hands-on training on various rides brought to Columbus by some of Ohio's ride companies.

Over 100 individuals attended the Forum, representing 20 out of the 37 states which have a ride inspection program, and Canada.

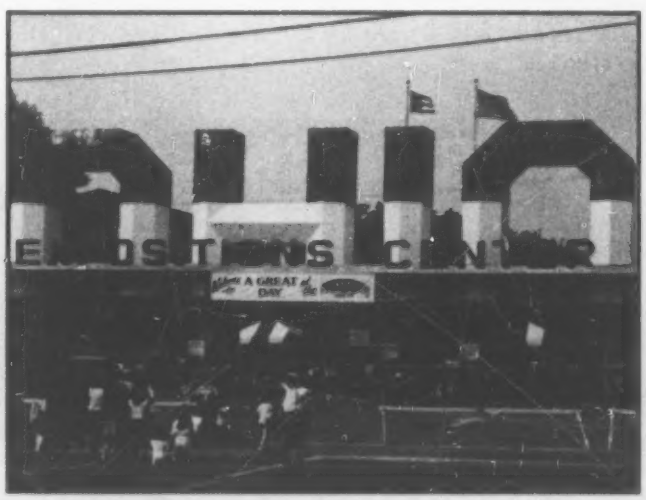
The week long Forum included classroom sessions and field inspections on various types of rides. All individuals completing the 40 hour training session were awarded 4.0 hours of continuing education credits through Columbus State.

1989 INSPECTION REPORT

Total Number of Parks & Events	1,200
Total Number of Parks and Events Inspected	679
Total Number of Rides Licensed	1,336
Total Number of Portable Ride Companies	106
Total Number of Permanent Parks	12
Total Number of Go Cart Facilities	23
Total Number of Water Attractions	25
Total Number of Game Licenses Sold	1,294
Total Number of Novelty, Game and Show Licenses Sold	1,449

REVENUE:

Ride Licenses	$40,080.00
Inspection Fees	$62,540.00
Game, Novelty & Show Licenses	$43,470.00



Consumer Analytical Laboratories

The Division of Consumer Analytical Laboratories (CAL) was officially established on July 1, 1989. Prior to that date the services of the various laboratories were performed by sections of the ODA enforcement divisions. The purpose of setting up a single laboratory division was to improve efficiency, productivity, cross utilize analysts and provide better service to all divisions.

CAL consists of the following six sections: food and dairy chemistry, meat chemistry, animal feed and fertilizer, microbiology, pesticide formulation and pesticide residue chemistry. The division employs nineteen persons including clerical staff, chemists, microbiologists, and administrative personnel.

CAL provides analytical services to the following ODA divisions upon their request: Food, Dairies and Drugs, Meat Inspection, Plant Industry and Animal Industry. Contract services are provided to the US Food and Drug Administration, US Environmental Protection Agency, the Ohio Department of Health, and the Ohio Department of Natural Resources. Additional services are provided free of charge to local/county health departments, public school systems, the highway patrol, various state and local service agencies as well as to the consumers of Ohio. The division chief represents the department on a variety of interagency committees at state, regional and national levels.

Areas of primary public concern during 1989 were the presence of the chemical Alar in apple juice and Ohio fruit products. Testing performed on Ohio apples revealed no presence of unsafe residues; however, the public remained concerned about the presence of pesticides in general in the food chain.

Due to the on-going concern with this issue, it is a primary goal of the Consumer Analytical Lab to continue to increase testing capabilities for pesticides and other foreign substances in human and animal food. In addition, the Division is also increasing its toxological services to the Division of Animal Industry.

CONSUMER ANALYTICAL LABORATORY TESTS PERFORMED - 1989

Agency	Samples reported	Analyses Made
ODA Food, Dairies and Drugs	1,311	5,415
ODA Meat Inspection	5,346	17,141
ODA Plant Industry	4,369	8,996
ODA Animal Industry	496	1,220
Ohio Dept. of Health & Ohio Dept of Natural Resources	3,495	4,077
Ohio Consumers	1,142	2,672
TOTALS	**16,296**	**39,558**

Reynoldsburg Laboratory Complex

ODA's Reynoldsburg Complex was initially constructed in 1912 as a facility to assist in perfecting a serum for hog cholera, which at the time was threatening Ohio's thriving swine industry .

Over the years the Complex has become the foundation of the Ohio Department of Agriculture. It has grown from the 10 buildings to 17, the most recent completed in 1987. The original buildings were built with penal labor primarily as brick barns. The tract of land they occupied was 98.67 acres; it was transferred from The Ohio State University to ODA on July 1, 1952.

ODA's ownership of the Lab Complex has provided the Department with the opportunity to centralize all its support laboratories, such as for Plant Industry, Animal Industry, etc. in one location. This has saved tax dollars previously spent on rent and allowed for more efficient management of resources.

In December of 1974, 37.33 acres of land were transferred to the State Department of Commerce for construction of the State Fire Academy.

In July of 1988, ODA purchased an adjacent farm of approximately 110 acres, 6.5 of which will be used by the Ohio Department of Transportation for a radio tower. The Department is currently studying proposals for the further use and development of the farm land.

Division of Enforcement

The Ohio Department of Agriculture is responsible for governing and administering many State and Federal laws. When a complaint is lodged, or it is believed that a violation of a law has occurred, ODA's Division of Enforcement is brought into investigation.

The responsibilities of this Division include collecting and preserving evidence, examining records, interviewing involved parties, and presenting evidence to prosecuting authorities. Testimony in court and/or administrative hearings to secure prosecution and compliance is also required. ODA investigators must often work hand-in-hand with local, state and federal law enforcement officers to accomplish their goals, and pride themselves on a close working relationship with those authorities.

The Division sponsors an annual Welfare Fraud Seminar, which in 1989 attracted more than 300 participants from state, federal and county welfare departments as well as law enforcement officers. This special training focuses on the detection and elimination of all types of welfare fraud.

Currently, five investigators are assigned full-time to the Food Stamp Fraud Unit, one to the Pesticide Enforcement Section of the Division of Plant Industry, and three to the enforcement of the State/Federal Meat Inspection Act. The remaining investigators cover the balance of ODA's divisions.

The Food Stamp Trafficking Unit (FSTU) - This unit was formed based on a contract between the United States Department of Agriculture's Food Nutrition Service, the Ohio Department of Human Services (ODHS), and ODA. Based upon this contract, the FSTU is the only statewide enforcement unit for food stamp fraud and trafficking. Since its implementation in 1984, FSTU has consisted of one criminal investigation supervisor, four criminal investigators, and one administrative secretary under the direction of the Division Chief.

The majority of the referrals for investigation have come at the request of Federal, State, County and Municipal agencies. The Ohio FSTU Program has been a leader in establishing new ways to investigate food stamp fraud and works constantly with other State, Federal and local officials.

The Compliance and Evaluation Section (C&E) - This section consists of a criminal investigation supervisor, four criminal investigators, two investigators and one secretary.

The C & E staff started 1989 with 209 pending complaints: 255 new complaints were logged and 214 completed for a gain of 31 pending complaints over 1988.

During 1989, 55 complaints were handled as full-case investigations and resulted in 25 prosecutions. Some of the cases were resolved with warning letters or notices of violation, while some involved personnel and resulted in resignation or other disciplinary action. A total of 155 warning letters, (75 more than in 1988) or notices of violation were issued in 1989 to firms that did not warrant prosecution, primarily because of a first offense and a voluntary compliance aim taken by C & E.

The C & E staff executed 87 embargoes involving 66,516 pounds of food items, mostly meat and poultry that was either adulterated or misbranded. The impoundment occurred as the result of 1,615 reviews. In addition, 74 Evaluation Incident Reports were generated to the Meat Inspection Division concerning minor infractions of the Meat Inspection Regulations.

Division of Foods, Dairies and Drugs

Ohio consumers can thank this ODA division for the cleanliness and freshness of the foods we eat and drink every day, as well as for the safety of the drugs we take when we are ill.

The focus of the Food, Dairies and Drugs Division is to protect consumers from any hazard connected with the merchandising of foods, dairy products, beverages and drugs. These can include problems with adulteration, illegal labeling, false advertising, spoilage, transportation, storage, refrigeration, handling and packaging. Consumer complaints related to any food product are also handled by this division.

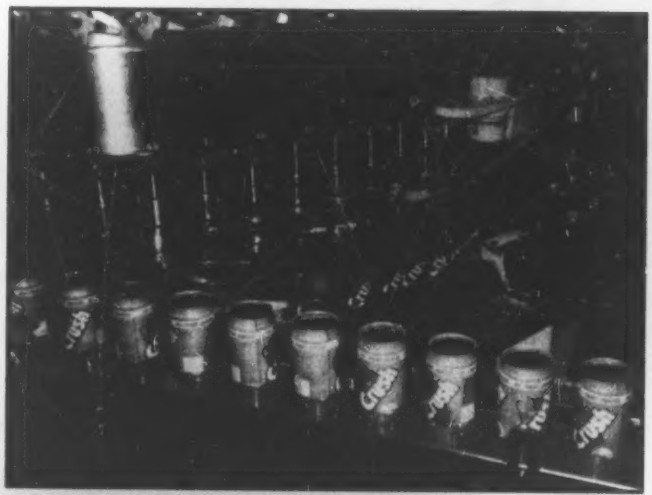
An important aspect of the Food, Dairies and Drugs protection program is grading services:

Poultry Grading - Poultry grading is a federal/state cooperative program where state personnel grade for the USDA. Grading is a marketing service which establishes levels of quality characteristics on poultry and related products. Grade factors allow the industry to have specific quality parameters, and help the consumer to readily identify graded products, which include shell eggs, poultry, poultry products, and rabbits. In addition, a Hatchery Surveillance Program and an Egg Surveillance Program help protect both consumers and producers.

Fresh Fruit and Vegetable Inspection - The Division has a similar cooperative agreement with USDA to provide grading and inspection services to maintain the quality of produce sold in Ohio, This is extremely important as commercial inspections provide the basis for orderly marketing of produce. Inspections take place at commercial establishments, institutions, and shipping points. Most state and federal institutions utilize these inspectors to insure the quality and condition of produce being delivered. During the harvest season, additional graders are hired for grading of tomatoes, pickles, onions, and potatoes.

ANNUAL REPORT STATISTICS
January 1, 1989 - December 31, 1989

	LICENSES	DEPOSITS
Bakeries	5,110	$ 127,065.00
Frozen Food Establishments	2,909	69,600.00
Canneries	130	6,500.00
Soft Drinks	178	17,800.00
Syrup and Extracts	47	2,350.00
Cold Storage Warehouses	34	3,400.00
Dairy Plants (Dealer's)	61	4,088.50
Temporary Weigher, Sampler, Tester	136	387.00
Weigher, Sampler, Tester	917	4,830.00
Frozen Dessert Establishments	1,880	64,868.25
TOTAL	11,402	$300,888.75



Division of Marketing and Communications

The Ohio Department of Agriculture's Division of Marketing and Communications serves two two extremely important purposes; as a vital link between ODA and legislators, media, constituents and the Ohio agricultural community, and as the branch responsible for promoting Ohio's agricultural products both here and abroad.

The first aim, communications, is accomplished through both pro-active and reactive contact with the media and consumers. Numerous press releases about happenings within the Department and agriculture in general are sent out on a weekly basis. During crisis situations and at other times when consumers may have questions about areas of agriculture, this Division serves as ODA's voice to the media and must present timely and accurate information.

The Division creates materials for distribution to the public, such as publications like this Annual Report, videotapes and brochures. These bring the message of agriculture to thousands of schoolchildren and many others throughout the state and the country. Through such efforts, more people become aware of the essential role agriculture plays in the state of Ohio, and of the responsibilities of the agency which regulates the industry.

The second aim of the Division of Marketing and Communications is the promotion of our state's agricultural products, both fresh and processed. Raw commodities are exported frequently through established lines of trade; the Department works to ensure that our value-added commodities are also in demand and recognized by both national and world markets.

An important aspect of the latter effort is the Ohio Agri-Export Assistance Program, a unique joint venture between the Ohio Department of Agriculture and the Ohio Department of Development. The program's goal is to assist the entrance of small to medium-size Ohio firms into the export market. Three ODA employees are housed within DOD's International Trade Division, where their agricultural contacts and expertise are combined with the state's overall trade mission.

Particular emphasis has been paid in recent years to raising the level of consumer awareness within Ohio with regards to recognition of home-grown and processed products. Research has proven that people will often choose local products when their freshness, quality and above all, origin, are made known to them before the purchase.

To further this identification with Ohio foods, Marketing and Communications has been a sponsor of "Buy Ohio Food Week" for the past two years, has held highly successful Heartland Cuisine cooking demonstrations at the Ohio State Fair, and is working to develop a quality-assured logo program which will be implemented in 1990.

The Marketing and Communications Division also works closely with commodity groups established under the Ohio Revised Code to promoted commodities, develop new markets and provide production research. These groups include: the Ohio Nursery Stock Marketing Program, Ohio Grape Marketing Program, Ohio Apple Marketing Program, Ohio Corn Marketing Program, Ohio Sheep and Wool Program, Ohio Beef Marketing Program, Ohio Egg

Marketing Program and the Ohio Turkey Marketing Program, as well as other commodity groups like the Ohio Pork Producers Association, and the Ohio Soybean Association.

Funding for commodity development projects is generally from self-imposed producer assessments. The Grape Industries Program, however, receives its monies from a three cent per gallon tax on wines sold in Ohio.

1989 OVERVIEW

• The hard work of Ohio's Agricultural Societies and fair board members was recognized by ODA at the Ohio Fair Manager's Convention in Columbus, January 8 - 10. These individuals are responsible for the success of our 94 county and independent fairs which make Ohio the outstanding fair state in the nation.

• The Ohio Corn Referendum was certified with a successful vote in January. This means that the Ohio Corn Marketing Program, funded by a 1/2 cent per bushel check-off, will be able to carry out its marketing and promotion activities for 5 years. The money will be put to use in researching new corn-based products, to establish educational programs and to develop new markets.

• ODA was an important part of the 29th Annual Ohio Roadside Marketing Conference, held in Dayton. About 250 marketers from Ohio and surrounding states attended this conference, the oldest of its kind in the nation. ODA had a booth and a Marketing & Communications staff member is on the planning committee for the 1990 conference. This promises to be something special as it will be combined with the National Direct Marketing Conference and over 1,000 people from across the U.S. and foreign countries are expected to attend.

• The Director traveled extensively during the early part of the year on trade missions to promote Ohio agricultural products overseas. At the end of January, he went with executives from the Midwestern International Agri-Trade Council (MIATCO) to Taipei, Taiwan. A chain of 5 Asian department stores was conducting Midwestern food shows, and introduced several Ohio processed food products.

• At the end of February, the Director visited Denmark, Belgium and Holland on behalf of the USDA's Foreign Agricultural Service and the National Association of State Departments of Agriculture. His purpose was to promote NASDA's International Food Show to foreign food buyers and importers. He was quite successful in this venture, and many attended the show which was held in May.

• Ohio Agriculture Week was celebrated in March with an "Agriculture Day" reception for legislators in the State House Rotunda. Samples of Ohio foods were served by commodity groups and ag businesses to about 150 Senators and Representatives, suitably reminding them of agriculture's position as the state's largest industry.

• Agriculture around the U.S., and apple growers in particular were alarmed when the Natural Resources Defense Council targeted Alar, a chemical used on apples. While the controversy went on, ODA Marketing & Communications worked in conjunction with the

Governor's Office and other state agencies to present to a worried public the most accurate and timely information possible. In particular, we were able to reassure consumers that Ohio apples were indeed safe; during testing, no unsafe residues were detected.

A Memorandum of Understanding was signed by ODA, apple grower groups, farm organizations and the Ohio Cooperative Extension Service to voluntarily discontinue the use of Alar during the 1989 growing season. Food safety will continue to be an issue of primary importance with the American public in the years to come; ODA has always been and will be committed to providing Ohio consumers with safe and healthy food product, and to keeping them informed issues of food safety.

• Also in the Spring, the Director went to Korea during a trade mission coordinated by the Ohio Agri-Export Program which promoted Ohio's hardwood industry. Ohio residents do not realize the importance of the forest industry in the state. Ohio's oaks and walnuts are particularly prized not only in the U.S. but worldwide. The mission resulted in many sales, and it was gauged a success.

• ODA was again a sponsor of "Buy Ohio Food Week," along with the Ohio Dept. of Development, the Ohio Grocers Assn. and the Ohio Food Processors Assn. Celebrity grocery bagging contests were held in supermarkets around the state to publicize the Food Week, which is a marketing effort aimed at increasing consumer identification of Ohio food products. Surveys have indicated that shoppers will often buy local products if they are aware of their origin. This annual event continues to grow in popularity as more and more stores participate.

• A comprehensive guide to Ohio's fresh-grown and processed foods was published, called "The Ohio Food Products Directory." Containing over 1,000 entries, it was distributed to persons influential in food-purchasing decisions, such as retailers, wholesalers, food editors and restauranteurs. It served as an important resource during "Buy Ohio Food Week," when over 1,500 grocery store owners received a copy.

• ODA was the host of the annual meeting of the Midwestern Association of State Departments of Agriculture (MASDA), held in Cincinnati during the first part of July. Director Maurer served as President of this organization in 1989. Other ag directors from 12 states participated, representing over 40% of American production. The technical part of the program featured speakers whose topics represented the most current issues in agriculture. Social events were very well-attended, and ODA was proud to show attendees the best Ohio has to offer.

• The Ohio State Fair was the setting of our exciting "Heartland Cuisine" cooking demonstrations, featuring "Foods From Just Down The Road." Hundreds of fair-goers watched daily as 31 chefs and commodity group experts presented a variety of dishes prepared with the finest of Ohio's quality foods and ingredients. Food samples were distributed and complimentary cookbooks met with enthusiastic reception. This popular program will be continued in 1990 in the Agriculture Center.

• Throughout the summer, Marketing & Communications staffed a toll-free Fruit & Vegetable Hotline. Consumers

who called in were told what produce was fresh in their area, and the phone numbers of the roadside markets nearest to them. Brochures with directions were also mailed to them at their request, courtesy of Farm Markets of Ohio. This service proved to be quite popular and will continue in years to come.

• Also, in August, a Sheep and Wool Referendum was passed with a resounding vote in favor of assessing sheep and wool producers 1/2% of the gross sale price of sheep and lambs, and 1 cent per pound of grease wool sold. Over 90% of Ohio producers were in favor of the program. The money will be used to fund research and promotional activities; expenditures will be governed by a Sheep and Wool Board made up of producers.

• The Director attended the annual meeting of the National Association of State Departments of Agriculture (NASDA) meeting, which was held September 1- 13 in Atlantic City, New Jersey. Among the topics discussed were the importance of supporting research into non-food uses of American agricultural commodities, and the necessity of establishing a joint committee in USDA to review food safety concerns. Both of these initiatives should be carried out during 1990.

• ODA was housed this year in a new building at the Farm Science Review in September. Our exhibits illustrated the activities of our divisions, and emphasized to the thousands of agricultural constituents who passed through our building the important role we play in regulating Ohio's number one industry.

• To further aid consumers in selecting Ohio products, development continued on a program which will allow logo identification of Ohio foods. Utilizing an adhesive sticker, the "Ohio Quality Assured" logo will appear only on products which have met or exceeded certain standards. It is expected that this program will be in place by the fall of 1990.

ON-GOING MARKETING & COMMUNICATIONS ACTIVITIES

Market News - The Division of Marketing and Communications has two distinct programs, one for livestock, and one for grain market news. In the livestock program, 15 companies are contacted daily to determine Ohio direct hog prices. Other livestock information includes U.S. major terminal markets and direct country markets, beef markets (both live and dressed trade), sheep markets, feeder calf and feeder pig markets.

Ohio cash grain markets are reported daily, as well as future prices, Toledo and Cincinnati terminal prices, and basis prices along with trends and changes in prices. This is the most comprehensive Ohio grain market information available in the state. The major wire services, newspapers, and radio stations utilize the Market News Service. Virtually all those involved in buying or selling grain, livestock, poultry, and poultry products use the service. In addition, insurance companies, investment companies and other government agencies use ODA as their source of market information.

URBAN CONSUMER AFFAIRS OFFICE

Under the auspices of the Marketing and Communications Division, this office represents the Ohio Department of Agriculture to northern Ohio's urban residents, specifically in the Greater Cleveland area. The main focus of the office is promoting Ohio products to consumers, again through heightened recognition of brand names, and superior quality and freshness. Staff members frequently give group presentations, attend seminars and work closely with the news media.

In addition, the Office serves as a localized complaint center for consumers with problems which need to be brought to the attention of ODA enforcement divisions, such as Weights and Measures, Food, Dairies & Drugs, etc.

The Urban Consumer Affairs Office served and/or represented the Department on the following committees or boards:

- Greater Cleveland Interchurch Council, Hunger Task Force Commission
- Future Farmer of America, (FFA) Greater Cleveland Branch
- Cuyahoga County Cooperative Extension Advisory Bd.
- Lorain County Ag and Natural Resources Council
- Kinsman Area Council Nutritional Committee
- Cleveland Dietetic Association Nutrition Committee
- Ministerial Association Nutrition Committee
- Cuyahoga County Urban Gardening "Seed to Shelf" Program
- Cleveland Job Corp Advisory Board Committee
- "Buy Ohio Food Week" & Best Bagger Contest
- Catholic Board of Education Head Start Centers Nutrition Committee

Following is a list of information and referrals which we provide to the urban consumer:

- Consumer complaints referred to ODA's toll-free number: (1-800-282-1955)
- Complaints forwarded to local and or Columbus office of the Attorney General
- Requests for food related pamphlets, state maps, fair schedules and job applications
- Referrals to Cuyahoga County Cooperative Extension Service

Division of Meat Inspection

The Division of Meat Inspection is responsible for administering the Ohio Meat and Poultry Inspection Laws in such a manner as to conform to provisions of the Wholesome Meat Act and the Federal Poultry Inspection Act passed by Congress in 1967. The Ohio program, as those of other states, is subject to review by the Federal Meat Inspection Service and must be certified as "EQUAL TO" federal inspection.

The Division operates its field program through 13 geographical districts, each district being supervised by a veterinarian and one or more program supervisors. Overall supervision of the program is provided by the Division Chief and Assistant Chief with the support from the technical staff headquartered at ODA's Reynoldsburg Laboratory Complex, 8995 East Main Street, Reynoldsburg.

The objective of the Meat Inspection Program is to assure that meat and poultry products are processed under sanitary conditions, are wholesome, unadulterated and properly labeled. To accomplish this, inspection is done through in the following steps:

1. ***Approval of Plant Facilities and Sanitation*** - Each establishment must provide a safe water supply, adequate sewage disposal system, properly installed plumbing and drainage systems and other facilities and procedures such as are necessary to maintain sanitary conditions within the establishment and to allow the production of wholesome products.

2. ***Antemortem and Inspection*** - Each animal/bird slaughtered for human consumption is examined by division inspectors before slaughter, and its carcass is examined at the time of slaughter and dressing to determine that it is wholesome and free of contamination. Animals and carcasses found to be diseased are handled under veterinary supervision to ensure that all meats and poultry which are diseased or otherwise unwholesome are disposed of in a manner that prevents their entering the public food supply.

3. ***Reinspection*** - Products passing postmortem inspection are subject to reinspection at every stage of handling to assure that only wholesome products, properly identified with an Ohio inspection legend, leave the establishment.

4. ***Preparation*** - The meat industry is required to exercise controls during the preparation of processed products to ensure that only wholesome ingredients are used and that added substances are approved and used only in allowable quantities. Processes must be adequate to eliminate the trichinae hazard, if pork is an ingredient in a product which is to be eaten without further cooking. The establishment is required to follow written formulas and processing procedures.

5. ***Labels*** - Labels to be used on processed products must be submitted to the division for advance approval. These labels on consumer packages must bear the Ohio inspection legend. This is the consumer's assurance that the product was wholesome, unadulterated and properly labeled when leaving the establishment.

In late 1989, the first Ohio Department of Agriculture Meat and Poultry Advisory Committee was established. The Committee will begin activity in early 1990. The purpose of this committee is to facilitate communication between ODA Food Regulatory Programs and the meat and poultry industries which are directly impacted by those programs. committee members include representatives from three Ohio meat and poultry industry associations. They will be asked to review and comment on regulatory policies as they affect the industry; to provide feedback on the effectiveness of existing policies; and to propose suggestions for the development of new or revised policies when and where they are needed.

The State Meat Inspection Program has now completed its first full year under the new Federal/State Performance Plan. This plan resulted in the implementation of major changes in the Program Review activities and operations. Review operations serve as a check on the program's inspection operations to assure that the federal requirement of being "at least equal to federal inspection" is being met. The USDA conducted a Federal Oversight Review in June 1989. Their findings resulted in a "marginal acceptable" rating. Program deficiencies identified in this review were addressed with substantial changes and increased activity in training programs; blueprint operations; and State review operations. The USDA then completed a follow-up Oversight Review of the program. The preliminary findings indicate substantial program improvement with only minor deficiencies noted.

The following statistical information illustrates the Ohio State Meat Inspection Program's animal, poultry and product inspection activities for federal fiscal year 1989 (October 1, 1988 to September 30, 1989).

NUMBER OF ESTABLISHMENTS INSPECTED

	1988	1989
Red Meat Full Inspection		
Slaughter	24	19
Processing	169	162
Combination	131	127
Sub-Total	324	308
Red Meat Surveillance		
Slaughter	4	4
Processing	32	27
Combination	57	47
Sub-Total	93	78
TOTAL RED MEAT	**427**	**386**
Poultry Full Inspection		
Slaughter	0	0
Processing	22	20
Combination	8	6
Sub-Total	30	26
Poultry Surveillance		
Slaughter	6	5
Processing	1	1
Combination	16	16
Sub-Total	23	22
TOTAL POULTRY	**53**	**48**

RED MEAT PRODUCT INSPECTED

	1988	1989
• *Fully Inspected & Passed Product*	# Head	
Cows	12,595	10,488
Heifers	29,229	23,994
Steers	68,640	54,020
Bulls	6,564	5,034
Calves	2,269	1,662
Lambs	15,658	14,389
Mature Sheep	3,022	2,697
Mature Goats	869	535
Young Goats	2,009	1,534
Sows/Boars	1,947	6,251
Market Hogs	72,575	154,660
Other Porcine	125,471	29,266
TOTAL RED MEAT	**340,848**	**304,500**
• *Suspect/Retained Product*		
Cattle	2985	4952
Calves	91	75
Swine	620	732
Sheep	84	77
Other Red Meat	4	9
Red Meat Livers Condmd.	480,913	435,310
Red Meat Parts Condmd.	840,3374	1,024,325
• *Red Meat Processed Product*		
Inspected Pounds	1,838,486,016	1,482,024,858
Retained Pounds	90,802	101,058
Condemned Pounds	357,141	596,037

POULTRY PRODUCTS INSPECTED

	1988	1989
• *Fully Inspected & Passed Product*	# Head	
Chicken Fryers	2,941,003	3,002,084
Roasters	25,752	37,387
Capons	135	618
Hens	17,715	11,342
Turkey Fryers	4,840	852
Young	170,957	153,582
Yearling	743	191
Duck Fryers	313	202
Roasters	7	74
Geese Tender	242	104
Other	300	622
TOTAL POULTRY	**3,162,007**	**3,207,058**
• *Carcasses Condemned*		
Chicken	84,240	70,859
Turkeys	1,214	996
Fowl	2	2
Parts Condemned (Lbs.)	136,481	150,981
• *Processed Poultry Products Further Inspected*		
Inspected & Passed Pounds	394,752,086	317,538,279
Retained Pounds	290,590	200,200
Condemned Pound	s210,429	246,850

CUSTOM SLAUGHTER RED MEAT

	1988	1989
• *Fully Inspected & Passed Product*	# Head	
Cows	455	338
Heifers	5,719	4,938
Steers	14,783	12,149
Bulls	75	147
Calves	24	73
Lambs	921	886
Mature Sheep	94	121
Mature Goats	40	42
Young Goats	135	76
Sows/Boars	21	91
Market Hogs	2,303	9,069
Other Porcine	9,328	3,003
TOTAL	**33,898**	**30,933**
• *Custom Processed Product*		
Lbs. of Product Processed	53,413,032	36,493,298
Lbs. of Product Retained	150	1,169
Lbs. of Product Condemned	157,109	82,569

Division of Plant Industry

The Division of Plant Industry is a multifaceted branch of the Ohio Department of Agriculture, comprised of seven sections. Each section is responsible for the enforcement of Ohio laws which have a biological basis. These laws provide economic protection to the producer and the consumer.

APIARY SECTION

The purpose of the Ohio Apiary Inspection Program is to diagnose diseases affecting honey bees and prescribe appropriate controls. This is accomplished through the annual registration of apiaries by beekeepers, and the inspection of these apiaries by state apiary inspectors supervising and assisting county appointed inspectors.

Three brood diseases were monitored: American foulbrood - 1.6%, European foulbrood - .63%, and chalkbrood - 1.7%. Slight increases in all diseases were seen in comparison to last year.

Effective July 1, 1989, apiary registration was increased from $1.00 to $5.00 per apiary. This was the first increase in 38 years.

APICULTURE PROGRAM

Total Bee Colonies Inspected	54,412
Total Apiary Locations Inspected	8,829
Interstate Movement Inspections (colonies)	2,210
American foulbrood diseased colonies diagnosed	898
European foulbrood diseased colonies diagnosed	324
Chalkbrood diseased colonies diagnosed	875
Disease samples taken for diagnosis	701
Registration certificates issued	7,899
No Consents received	125
County appointments approved	99
Consumer beekeeper requests	3,221

CERTIFICATES AND PERMITS ISSUED

Certificate of Health (out of state movement)	9
Permit of entry into Ohio	8
Quarantine apiary movement	4
Queen rearing certificate	2
Transfer ownership permit	2

FEED AND FERTILIZER SECTION

This section administers Ohio's Commercial Feed Law, Fertilizer Law, Agricultural Liming Materials Law, Agricultural Additive Law, and Anhydrous Ammonia Regulations. Feed and liming material manufacturers and distributors are licensed annually by calendar year. Fertilizer licenses and specialty fertilizer registrations are issued by fiscal year (July/June). A $5.00 license fee is charged for fertilizer licenses. A $20.00 license fee is charged for feed licenses. A liming material license is $50.00. Registration of specialty fertilizer (lawn and garden) is $50.00 per grade. Additive registration is $50.00 per product per year.

With the exception of the Agricultural Additive Law, all of the other laws provide for an inspection fee. The inspection fee is 10 cents per ton for feed, 12 cents per ton for fertilizer, and 1/4 of one cent for each ton of liming material in excess of 2,500 tons.

In 1989, there were 1,114 firms licensed to manufacture or distribute commercial feeds, 98 firms to distribute liming materials, and 688 firms to manufacture or distribute commercial fertilizers. Registrations were issued for 1,782 specialty fertilizer products and 3 agricultural additives.

In addition to routine feed and fertilizer inspections, all six inspectors performed 75 medicated feed inspections and visits on firms registered with FDA on a contract basis. Inspectors also conducted approximately 10 anhydrous ammonia schools for employees at fertilizer dealers and fire departments across the state.

The office staff is responsible for issuing licenses, registering products, and processing inspection fee reports. Product analysis bulletins and fertilizer tonnage sales reports are prepared semiannually. The liming tonnage report is prepared annually. These reports are distributed to the county agents and may be requested by contacting the Feed and Fertilizer Section.

FEED AND FERTILIZER LABORATORY

The agricultural chemical laboratory analyzes animal feeds, fertilizers, liming materials, pesticides and samples. These analyses are to insure the proper labeling of consumer and speciality products. Feeds are checked for protein, drugs, minerals, vitamins, trace elements and adulterate.

Fertilizers are being tested for nitrogen, phosphorus, potassium and trace elements. Calcium, magnesium, total neutralizing power, and screen analyses are performed on agricultural liming materials. Custom mix samples are being implemented for assays.

FEED PROGRAM

Licenses Issued	1,14
Tonnage Processed	1,502 (1,846,261 tons)
Inspections	1,661
Samples Collected	1,737
Samples Reported	1,842
Samples Out of Tolerance	403
FDA Medicated Feed Inspections	75

FERTILIZER PROGRAM

Licenses Issued	688
Registrations Issued	1,782
Tonnage Processed	901 (1,720,964 tons)
Inspections	1,878
Samples Collected	1,341
Samples Reported	1,420
Samples Out of Tolerance	278
Anhydrous Ammonia Inspections	292

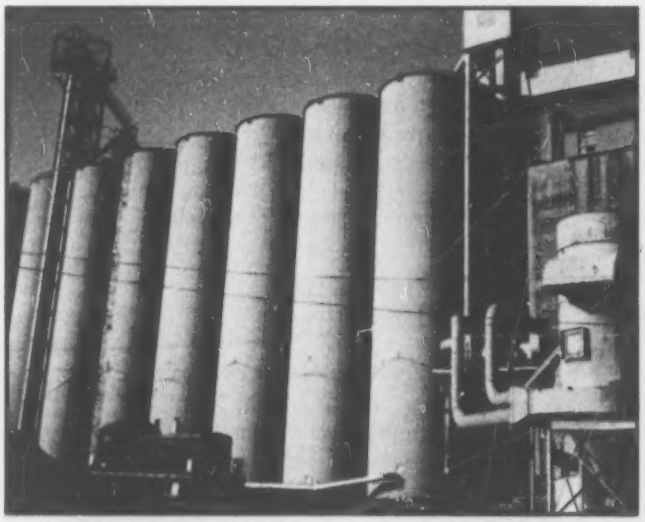
LIMING MATERIAL PROGRAM

Licenses Issued	98
Tonnage Processed	40 (1,021,820 tons)
Inspections	197
Samples Collected	128
Samples Reported	133
Samples Out of Tolerance	39

GRAIN WAREHOUSE SECTION

The Grain Warehouse Section of Plant Industry regulates agricultural commodity handlers (grain elevators) in Ohio. Any person or business purchasing over 10,000 bushels of of agricultural commodities in any calendar year is required to license with ODA. Licensing requires certain net worth requirements, proof of insurance and payment of a fee for licensing and examination. Examinations are conducted at random to spot check elevator compliance and financial solvency.

The section also oversees the Agricultural Commodity Depositors Special Account (Indemnity Fund). The Indemnity Fund was established by House Bill 770 and became effective on July 1, 1983. A half-cent per bushel fee is assessed on all grain delivered to Ohio licensed



elevators. This fee is remitted to ODA and held in TRUST and used exclusively to indemnify producer depositors and warehouse receipt holders in the event and elevator fails. Prior to the establishment of the fund, producers lost large sums of money in several insolvencies (estimated records indicate $8 million from 1968 to 1982).

The program is funded by the License and Examination Revenue collected and in addition ODA has entered into a cooperative examination program with USDA. ODA is paid for performing examinations of UGSA licenses for USDA. These licenses were previously examined by OSDA and ODA so the Agreement provides for more overall efficiency. The remainder of funding is provided by the indemnity fund interest pursuant to state law. Currently, the one-half cent per bushel fee is not being collected because the fund remains above the $4 million cap established by law.

A seven-member commodity Advisory Commission advises the Director of ODA on the administration of the Grain Warehouse Program. The commission consists of three farmers, three elevator operators, and one banker representing an agricultural lender.

The Grain Warehouse Program is headquartered at the Reynoldsburg Laboratory Complex and consists of four adminstrative personnel and ten examiners.

If you have a question or complaint, please feel free to call the Grain Warehouse Section at 614-866-6361.

Comparative Summary of Grain Warehouse Receipts & Examinations

	1989	1988	1987	1986
Commodity Handler License Fees	$217,395.39	$252,908.49	$145,749.94	$171,395.78
Number of Handler Licenses Issued	676	663	711	707
Interest Earned on Indemnity Fund	$519,926.10	$426,903.59	$426,245.71	$548,698.85
Interest Utilized for Operational Use	$483,292.00	$214,666.00	$139,521.00	70,000.00
Balance in Treasurer's Account 498	$5,473,637.78	$5,973,220.31	$5,851,633.29	$5,660,742.94
Claims Against Indemnity Fund	130	32	55	105
Total Amount Paid in Claims	$534,387.79	$206,879.30	$125,143.39	$289,477.66
Monies Recovered to Indemnity Fund	$600.00	$15,550.00	$22,420.08	20,751.82
Number of Warehouse Examiners	6.9 (avg.)	9.4 (avg)	10	9
Number/Warehouse Examinations Completed	662	778	586	735
Violation Notices Issued	185	274	209	71

PESTICIDE REGULATION SECTION

Food safety and water quality were the most significant public issues concerning pesticides in 1989. Publicity concerning pesticides including Alar, Temik, EBDCs, 2 4-D and others kept the staff busy responding to public inquiries as well as federal and state regulation changes dictated in response to these crises.

Planning is moving ahead toward implementation of new federal rules to be enforced through our U.S.E.P.A. - ODA cooperative enforcement agreement covering worker safety, endangered species protection and water quality. Each initiative is jointly funded by ODA and U.S.E.P.A. Federal grant funds for ODA Pesticide Regulation enforcement activities increased from $246,900.00 in FY 1989 to $469,000.00 in FY 1990.

Inspections conducted by the six field staff included:

- 270 - Restricted Use Dealer Audits
- 203 - Commercial Pesticide Applicator Record Audits
- 727 - Inspection of retail pesticide sales places
- 123 - Bulk pesticide facility inspections
- 280 - Pesticide Use follow-up investigations
- 710 - Pesticide formulation samples
- 29 - Experimental Pesticide Use Permit sites

Certification of pesticide applicators continued to be a major program activity within the Pesticide Regulation section. 7,240 persons were tested this year (3,663 private applicators and 3,577 commercial applicators.

Pesticide applicators recertified in 1989 were as follows:

- 2,539 - Commercial Applicators
- 8,099 - Private Applicators

Enforcement actions taken by the section in 1989 are as follows:

- 97 - Written warning notices
- 22 - Pesticide product Stop Sales
- 11 - Criminal cases filed

PLANT PEST CONTROL SECTION

A total of 1,272 nurseries were inspected in 1989, comprising 15,724 acres overall. This represents a slow, but steady increase in nursery size over the past 20 years. Approximately 3,350 nursery dealers were licensed and inspected in 1989.

The top twenty insects and diseases reported during 1989 are as follows:

Diseases	Insects
Leaf Spots	Aphids (various spp.)
Apple Scab	Japanese Beetle
Powdery Mildew	Leafhoppers (various spp.)
Septoria Leaf Spot	Bagworm
Grown Gall	Fall Webworm
Bacterial Leaf Spot	Black Vine Weevil
Cedar-Quince Rust	Twospotted Spider Mite
Black Spot	Potato Leafhopper
Verticillium Wilt	Eastern Sprucegall Adelgid
Phyllosticia Leaf Spot	Birch Leafminer
Botrytis Blight	Cooley Sprucegall Adelgid
Leaf Blister	Fletcher Scale
Gloeosporium Leaf Spot	Hawthorn Lace Bug
Juniper Blight	Honeylocust Plant Bug
Anthracnose	Slugs (various spp.)
Cedar-Hawthorn Rust	Pine Bark Adelgid
Scab	Yellow-Poplar Weevil
Diplodia Tip Blight	Bronze Birch Borer
Brown Rot	Honeylocust Spider Mite

Ohio experienced unusually heavy rainfall during the early Summer which contributed to a severe slug problem in many crops, including ornamentals, and Hosta in particular. On the other hand, spider mites were practically non-existent until late Summer when things dried out. Bagworm and Yellow-poplar weevil were ever present in Central and southern Ohio again this year after another mild Winter.

The drought stress from 1988 appeared to have its greatest effect this year in the form of borer problems. Trees under stress last Summer apparently attracted a wide variety of wood and bark borers, including Round-headed Borers, Flat-headed Borers, Bark Beetles, Clearwing Borers, and a number of unknowns. Potato Leafhoppers were unusually abundant this year for some reason and caused severe damage to many shade trees, particularly Maples.

Due to an unusually wet spring, leaf spots were very abundant as was anthracnose and apple scab. Discula or dogwood anthracnose was reported in Ohio for the first time. This is a new state record.

The fee structure for Ohio nurseries and nursery dealers was increased during the last session of the Ohio General Assembly. This was the first time in 20 years that the fees had been raised or modified in any way. One of the significant changes was the distinction made in nursery acreage between field stock and intensive production area (greenhouses, polyhouses, containers, liner and lath beds). The latter category is now being charged at a higher rate per unit of area due to the additional time necessary to make the inspection.

Export Certification continues to be a major activity on a year-round basis. Last year, the Section issued 2,395 phytosanitary certificates. The major export commodities are oak logs and lumber, popcorn, and nursery stock. The principal importing countries are Canada (nursery stock), EEC Countries (logs & lumber), and popcorn worldwide.

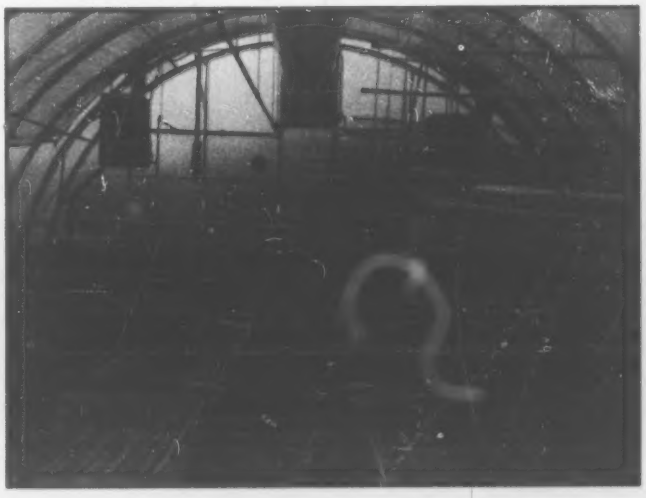
GYPSY MOTH PROGRAM

Approximately 18,000 pheromone traps were placed throughout Ohio's 88 counties by state and federal personnel. The milk-carton trap was used to survey infested or "leading-edge" counties while the delta trap was used elsewhere in the state. Total moth catch for the state was 289,000 male moths representing a 300% increase over 1988. Much of this total was probably due to "blow-in" moths from Pennsylvania. Approximately (5) NE counties are generally infested with egg mass counts running as high as 2,000/acre. Some spotty defoliation in woods with high oak composition will probably occur next season.

Eradication treatments were made at four sites during May of 1989, three with ground equipment and one with a helicopter. Dimilin was used at all four sites. Currently, plans are underway to aerially spray 10-11 small sites in Ohio during the spring of 1990. Three of the sites are isolated infestations where eradication of the Gypsy Moth population will be the principal objective. Infested woodlands surrounding large shipping nurseries will receive high priority, as well as other sites with regulatory significance.

SEED SECTION

The seed section provides for the sampling and testing of agricultural and vegetable seeds. Two permanent seed inspectors and six seasonal inspectors in 1989 drew official seed samples for both germination and purity analysis. Laboratory results are then compared with seed label claims. Any label statement not within tolerance must be relabeled or a Stop Sale is issued.



SEED PROGRAM

Seed Labelers Permits Issued	397
Packet Vegetable Seed Fees	$54,436.57
Seed Tags Issued	1,225
Seed Tonnage Fees	$119,432.77
Inoculant License Issued	8
Applicator's Licenses Issued	128
Income—Laboratory Services	$5,442.00
Total Income	$184.643.34
Inspections	5,4552
Samples Taken	3,217
Samples Analyzed	3,019
Stop Sales	73
Relabel	205

Division of Weights and Measures

In Ohio, the Director of Agriculture is the State Sealer of Weights and Measures. A Deputy Sealer (Chief of the Division of Weights and Measures) is appointed by the Director and is responsible to the Director for the administration and enforcement of weights and measures laws of the Ohio Revised Code. The office of the Chief of Weights and Measures and the state metrology laboratory, where the state's primary mass, length and volume standards are housed, are both located at the Department's laboratory facility in Reynoldsburg.

Presently, the Division of Weights and Measures has the responsibility of implementing seven major programs.

Metrology - Ohio's metrology lab is equipped with personnel capable of performing routine testing, calibrations and specialized requests with a high degree of technical and professional competence. The laboratory is a participant in the Laboratory Auditing Program administered by the National Institute of Standards and Technology (formerly the National Bureau of Standards). The laboratory and state metrologists have also participated in the Northeast Measurement Assurance Program and its round-robin activities since the conception of the program in 1979. The Division continues to work with the National Institutes's Office of Weights and Measures to insure compliance with the "certification by measurement area" program. A Laboratory Quality Assurance Program has also been implemented. The Division recognizes the need to continually upgrade the staff training, measurement equipment and overall laboratory competence.

This year 11,062 official, commercial or scientific standards were submitted to the metrology laboratory for testing or calibration. The lab performed service for 363 different companies, 106 local jurisdictions in Ohio and 17 other governmental agencies.

National Type Evaluation Program (NTEP) Laboratory Ohio is known as the "cradle of the scale industry" due to the large number of major scale manufacturers that distribute their devices worldwide. The Ohio scale industry depends upon an effective, equitable state weights and measures program in order to compete profitably with industry from neighboring states, as well as with foreign manufacturers.

As a participating laboratory under the National Type Evaluation Program, Ohio has established itself as a leader in the field of weights and measures. Presently, only three other laboratories in the United States have NTEP authorization: the National Institute of Standards and Technology's Office of Weights and Measures in Gaithersburg, Maryland; the State of California; and the State of New York.

Ohio's NTEP Laboratory provided evaluation services to six Ohio companies and 23 out-of-state companies during 1989. This center for the evaluation and approval of scale designs and other weighing and measure elements, thoroughly evaluated 62 devices and 29 indicators during the year. The National Bureau of Standards/Office of Weights and Measures issued "Certificates of Conformance" for 47 of the devices/indicators Ohio's NTEP staff evaluated.

Advise, Assist and Train - There are 88 counties and 9 cities in Ohio that have established weights and measures programs. All local jurisdictions check small capacity scales and gasoline pump meters. Many of the jurisdictions reweigh packages and some check parking meters, taxi meters, and investigate local complaints.

The Director of Agriculture and his Deputy State Sealer advise and assist these local sealers regarding their powers and duties. Under provisions of the Ohio Revised Code, the State shall provide for the training of local weights and measures sealers and may establish minimum training requirements.

In addition, the Department assists the local weights and measures jurisdictions through the following programs:

Vehicle Scales - Ohio has five large capacity scale testing units. Two of the units are tractor trailer rigs that carry 40,000 pounds of calibrated test weights. Two are tri-axle units that carry 30,500 pounds of calibrated test weight. The other one carries 10,500 pounds of calibrated test weight.

Division of Weights and Measures

Inspection Statistics
1989

FIELD PROGRAMS

	INITIAL CHECK Sealed	Rejected	Condemned	RECHECK Sealed	Rejected	Condemned	Total Tested &/or Inspected	Total Known	Rejection Rate
Large Capacity Vehicle Scales	1721	426	98	30	20	3	2495	2880	19.1%
State Patrol Vehicle Scales	16	0	3	0	1	0	21	21	15.8%
Livestock Scales	0	0	0	0	0	0	0	206	

	INITIAL CHECK Sealed	Adjusted	Rejected	Condemned	RECHECK Sealed	Adjusted	Rejected	Condemned	Total Tested &/or Inspected	Total Known	Rejection Rate
Fuel Meters (100 gallons)	2152	356	38	11	23	10	0	0	2253	2300	18.4 %
L.P. Gas Meters	407	185	34	6	16	10	3	0	482	626	50.3 %

	Number Lots Checked	Number Packages Checked	Number Packages Represented in Lots	Number Lots Rejected	Number Packages Ordered Off-Sale
Random	354	9740	495,311	82	78,974
Standard	111	1010	3602	80	2134

	Number Products	Number Products Suspected Short	Percentage Suspected
Audit Testing	1417	82	5.8

Establishments Visited
219
Violation Letters Issued
59

NATIONAL TYPE EVALUATION LAB STATISTICS

6 Ohio companies received type evaluation services

29 Out-of-state companies received type evaluation services

Devices < 2000 lb. Evaluated	Devices > 2000 lb. Evaluated	Cash Registers Indicators Only Evaluated	Total Devices/Indicators Evaluated	Certificates of Conformance Issued
46	10	15	71	47

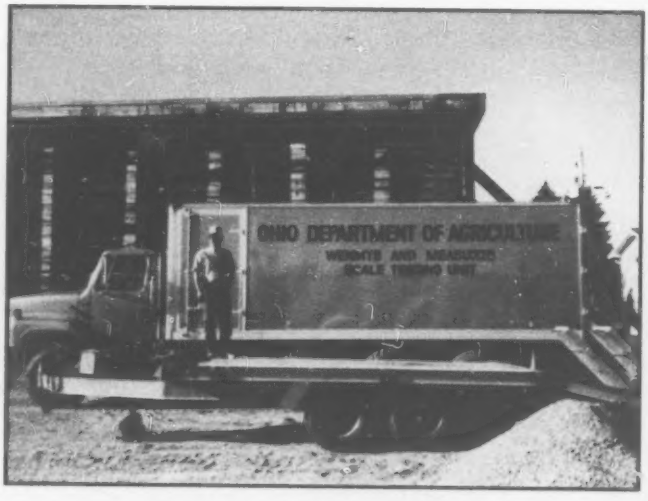
This year 2,495 vehicle scales were tested and/or inspected—of this number, 524 were rejected for repair or condemned for replacement on the initial check, for a rejection rate of 21 percent.

Fuel Meters - Ohio's Weights and Measures Division operated two 100 gallon provers on trailers and a 95 gallon L.P. Gas prover during the year. State weights and measures inspectors travel the State with these provers, inspecting and testing fuel delivery truck meters. In 1989, 2,780 such meters were inspected and/or tested and of this number, 630 required adjustments or were condemned for repair or replacement on the initial tests/inspections for an average rejection rate of 18.4 percent for fuel meters and 50.3 percent on L.P. gas meters.

Package Control - Ohio has two weights and measures staff members assigned to check prepackaged commodities (fertilizer, meat, milk, produce, etc.). Special assistance, specialized complaints and consumer complaints are also investigated under this program (short weight and short measure in firewood, kerosene, insulation, etc.).

Fifty-nine (59) violation letters were sent to packers in violation of Ohio law notifying them of the nature of their violations (short weight, improper labels, etc.). In addition, a listing of documented package violations was included in each issue of the Division's "Quarterly Review" newsletter for local weights and measures jurisdictions' review.

Voluntary Registration of Service Persons & Agencies (VRSPA) - Agencies and individuals who install, recondition and repair weighing and measuring devices may apply for registration through the state's VRSPA Program. Participants must meet prescribed requirements ansuccessfully complete a state examination before being registered. In 1989, 94 individuals representing 30 Ohio scale and meter companies were registered.



DEPARTMENT OF AGRICULTURE
STATE OF OHIO

Ohio Department of Agriculture Fruit and Vegetable Hotline

1-800-541-6744

Coyote Indemnity Fund

March 1989 - February 1990

The Coyote Indemnity Fund is a program administered by the Ohio Department of Agriculture in cooperation with the U.S. Animal and Plant Health Inspection Service (APHIS). Monies are provided for reimbursement to farmers whose livestock has been killed by coyotes.

When a farmer suspects that an animal has been killed by coyotes, he first contacts the county Dog Warden. The Dog Warden will inspect the animal, and if he believes it is a coyote kill, he will contact the Ohio Division of Wildlife's Game Protector for that county. The Game Protector must also evaluate the kill and prepare a statement. If it is finally determined that the animal was killed by coyotes, the entire investigation report is sent to ODA's Wildlife Damage Specialist. The farmer will be reimbursed for the animal from the Indemnification Fund at current fair market value (this accounts for the fluctuation of reimbursement amounts as shown below).

COUNTY	Turkey	& Amount	Sheep	& Amount	Calves	& Amount	Goats	& Amount	
Adams			17	1,500.00	2	250.00			
Ashland			13	450.00					
Athens			8	345.00					
Belmont			34	1,750.00	1	175.00			
Brown			1	125.00					
Butler	5	50.00	30	1,800.00	2	375.00			
Carroll					1	100.00			
Champaign			11	600.00					
Clark			1	80.00					
Clermont					1	125.00			
Clinton			14	525.00					5 Pigs - 150.00
Coshocton			9	500.00					
Darke	32	100.00	3	95.00			3	175.00	
Delaware			18	1,100.00					
Fayette			1	25.00					
Geauga			15	775.00					
Guernsey			15	475.10	3	285.00	1	35.00	
Hardin			4	125.00					
Harrison			46	2,285.00	1	125.00			
Henry			4	400.00			1	50.00	
Highland			50	3,893.00	2	200.00	4	225.00	
Hocking			2	75.00	1	100.00			
Licking			44	2,000.00					
Logan			6	190.00					
Madison			3	190.00					
Marion	47	350.00	6	590.00					
Miami			24	1,116.00					1 Pig - 15.00
Montgomery			2	80.00	1	150.00			
Monroe			5	75.00					
Morgan					1	100.00			
Morrow			9	585.00					
Muskingum			12	755.00	1	150.00			
Noble			3	195.00					
Pickaway			9	514	1	100.00			
Preble			3	110.00					
Ross			2	150.00					
Seneca			11	420.00	2	280.00			
Shelby			1	40.00					
Tuscarawas			5	150.00					
Union			62	2,617.00					
Wyandot			7	395.00					
Wood			3	108.00					
GRAND TOTAL	**84**	**500.00**	**508**	**27,128.00**	**17**	**1,910.00**	**9**	**485.00**	**165.00**

1990 Ohio Department of Agriculture

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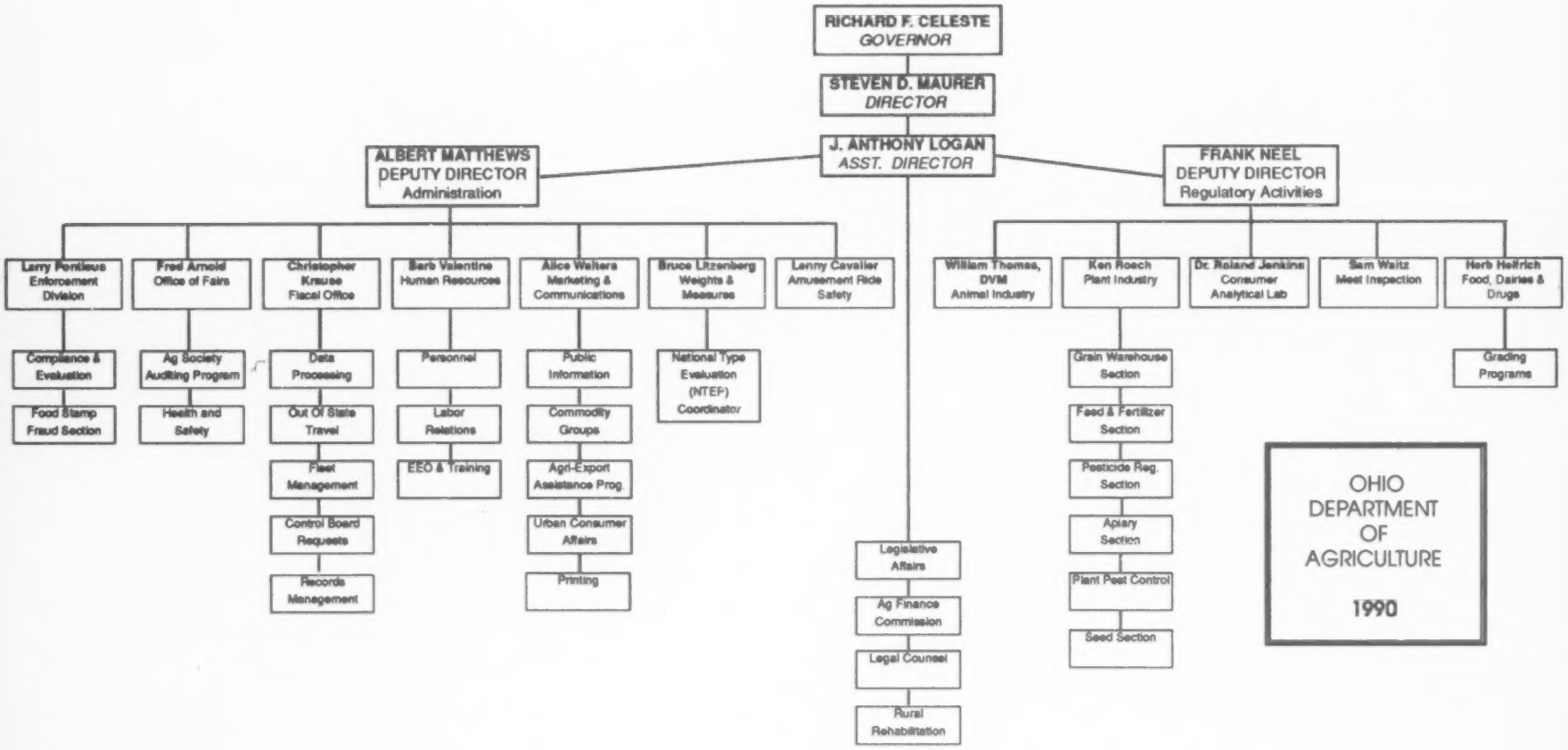
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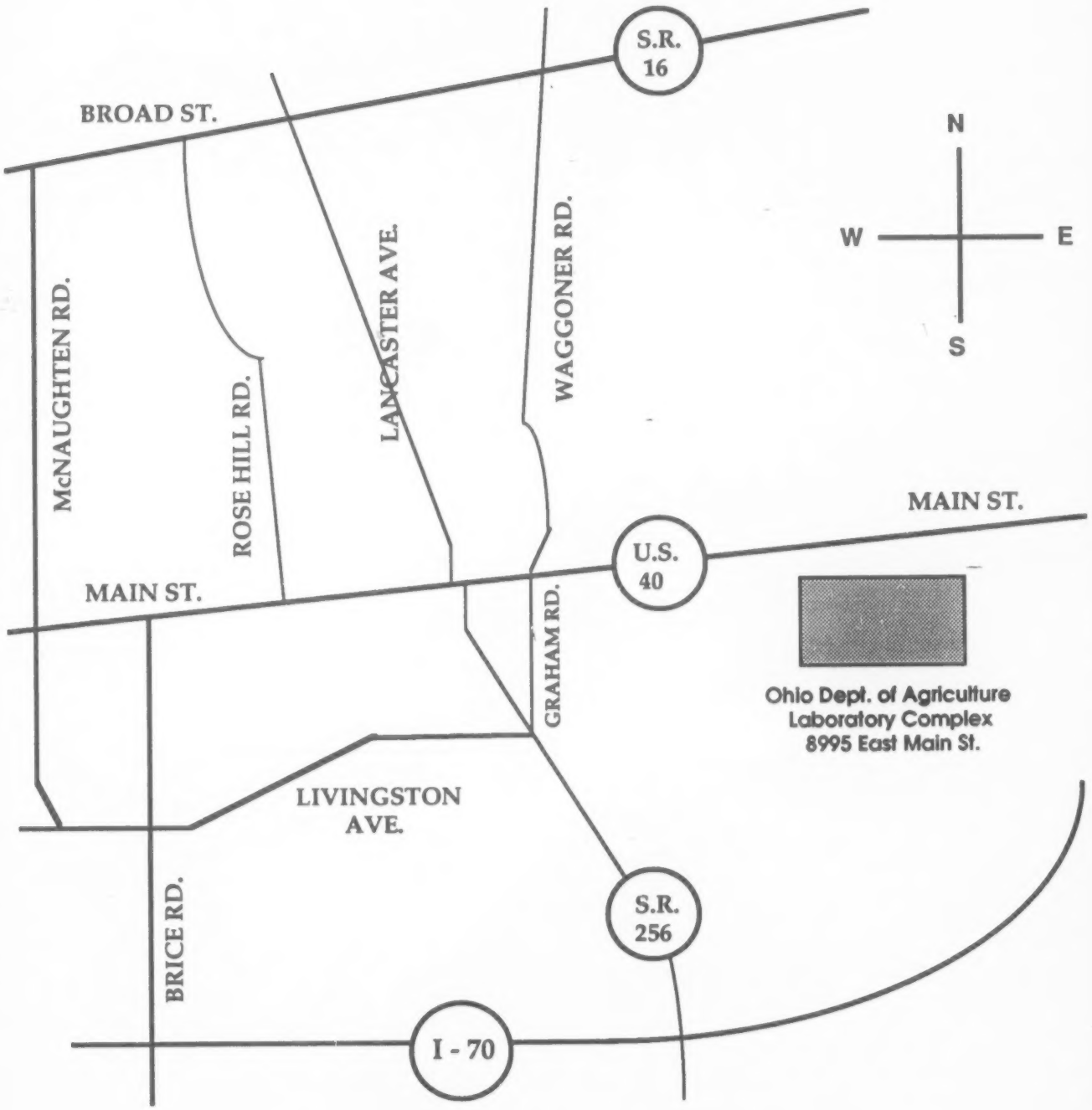
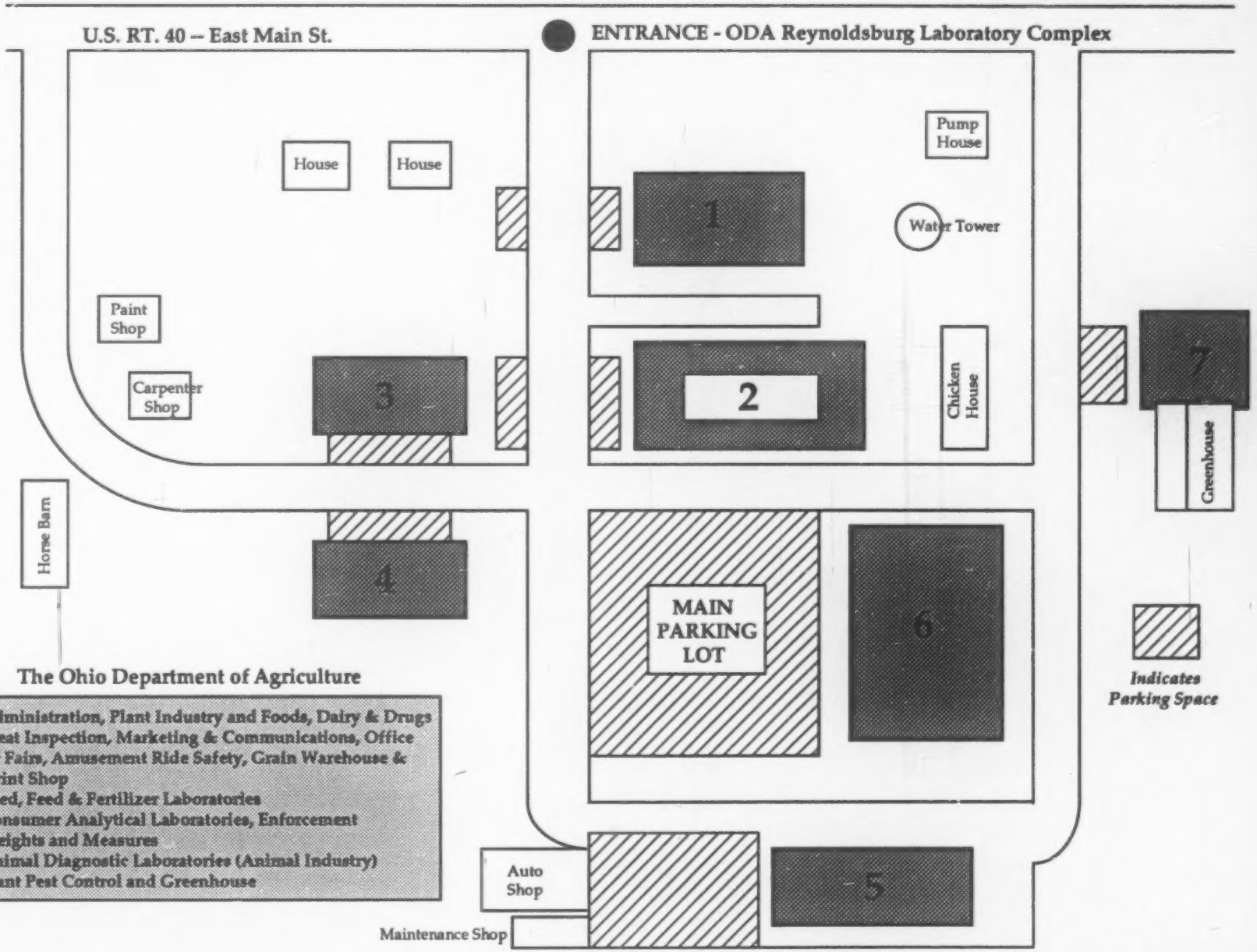
Rural Rehabilitation
Grain Warehouse Section
Feed & Fertilizer Section
Pesticide Reg. Section
Apiary Section
Plant Pest Control
Seed Section
Grading Programs
OHIO DEPARTMENT OF AGRICULTURE
1990



MAP TO ODA REYNOLDSBURG LABORATORY COMPLEX


U.S. RT. 40 – East Main St.
ENTRANCE - ODA Reynoldsburg Laboratory Complex
House
House
Pump House
1
Water Tower
Paint Shop
Carpenter Shop
3
2
Chicken House
7
Greenhouse
Horse Barn
4
MAIN PARKING LOT
6
Indicates Parking Space
The Ohio Department of Agriculture
1: Administration, Plant Industry and Foods, Dairy & Drugs
2: Meat Inspection, Marketing & Communications, Office of Fairs, Amusement Ride Safety, Grain Warehouse & Print Shop
3: Seed, Feed & Fertilizer Laboratories
4: Consumer Analytical Laboratories, Enforcement
5: Weights and Measures
6: Animal Diagnostic Laboratories (Animal Industry)
7: Plant Pest Control and Greenhouse
Auto Shop
5
Maintenance Shop

NOTES

NOTES

United States Department of Agriculture
Ohio Agricultural Statistics Service
Agricultural Statistician
N. High Street, Room 608
Columbus, Ohio 43215-2498

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